XX. *Catalogue of a ſecond Thouſand of new Nebulæ and Cluſters of Stars; with a few introductory Remarks on the Conſtruction of the Heavens. By* William Herſchel, *L L. D. F. R. S.*

Read June 11, 1789.

BY the continuation of a review of the heavens with my twenty-feet reflector, I am now furniſhed with a ſecond thouſand of new Nebulæ.

Theſe curious objects, not only on account of their number, but alſo in conſideration of their great conſequence, as being no leſs than whole ſidereal ſyſtems, we may hope, will in future engage the attention of Aſtronomers. With a view to induce them to undertake the neceſſary obſervations, I offer them the following catalogue, which, like my former one, of which it is a continuation, contains a ſhort deſcription of each nebula or cluſter of ſtars, as well as its ſituation with reſpect to ſome known object.

The form of this work, it will be ſeen, is exactly that of the former part, the claſſes and numbers being continued, and the ſame letters uſed to expreſs, in the ſhorteſt way, as many eſſential features of the objects as could poſſibly be crowded into ſo ſmall a compaſs as that to which I thought it expedient to limit myſelf.

The method I have taken of *analyzing* the heavens, if I may ſo expreſs myſelf, is perhaps the only one by which we can arrive

arrive at a knowledge of their conſtruction. In the proſecution of ſo extenſive an undertaking, it may well be ſuppoſed that many things muſt have been ſuggeſted, by the great variety in the order, the ſize, and the compreſſion of the ſtars, as they preſented themſelves to my view, which it will not be improper to communicate.

To begin our inveſtigation according to ſome order, let us depart from the objects immediately around us to the moſt remote that our teleſcopes, of the greateſt *power to penetrate into ſpace*, can reach. We ſhall touch but ſlightly on things that have already been remarked.

From the earth, conſidered as a planet, and the moon as its ſatellite, we paſs through the region of the reſt of the planets, and their ſatellites. The ſimilarity between all theſe bodies is ſufficiently ſtriking to allow us to comprehend them under one general definition, of bodies not luminous in themſelves, revolving round the ſun. The great diminution of light, when reflected from ſuch bodies, eſpecially when they are alſo at a great diſtance from the light which illuminates them, precludes all poſſibility of following them a great way into ſpace. But if we did not know that light diminiſhes as the ſquares of the diſtances encreaſe, and that moreover in every reflection a very conſiderable part is intirely loſt, the motion of comets, whereby the ſpace through which they run is meaſured out to us, while on their return from the ſun we ſee them gradually diſappear as they advance towards their aphelia, would be ſufficient to convince us that bodies ſhining only with borrowed light can never be ſeen at any very great diſtance. This conſideration brings us back to the ſun, as a refulgent fountain of light, whilſt it eſtabliſhes at the ſame time beyond a doubt that every ſtar muſt likewiſe be a ſun, ſhin-

ſhining by its own native brightneſs. Here then we come to the more capital parts of the great conſtruction.

Theſe ſuns, every one of which is probably of as much conſequence to a ſyſtem of planets, ſatellites, and comets, as our own ſun, are now to be conſidered, in their turn, as the minute parts of a proportionally greater whole. I need not repeat that by my analyſis it appears, that the heavens conſiſt of regions where ſuns are gathered into ſeparate ſyſtems, and that the catalogues I have given comprehend a liſt of ſuch ſyſtems; but may we not hope that our knowledge will not ſtop ſhort at the bare enumeration of phænomena capable of giving us ſo much inſtruction? Why ſhould we be leſs inquiſitive than the natural philoſopher, who ſometimes, even from an inconſiderable number of ſpecimens of a plant, or an animal, is enabled to preſent us with the hiſtory of its riſe, progreſs, and decay? Let us then compare together, and claſs ſome of theſe numerous ſidereal groups, that we may trace the operations of natural cauſes as far as we can perceive their agency. The moſt ſimple form, in which we can view a ſidereal ſyſtem, is that of being globular. This alſo, very favourably to our deſign, is that which has preſented itſelf moſt frequently, and of which I have given the greateſt collection.

But, firſt of all, it will be neceſſary to explain what is our idea of a cluſter of ſtars, and by what means we have obtained it. For an inſtance, I ſhall take the phænomenon which preſents itſelf in many cluſters: It is that of a number of lucid ſpots, of equal luſtre, ſcattered over a circular ſpace, in ſuch a manner as to appear gradually more compreſſed towards the middle; and which compreſſion, in the cluſters to which I allude, is generally carried ſo far, as, by imperceptible degrees, to end in a luminous center, of a reſolvable blaze of light. To ſolve this appearance, it may be conjectured, that ſtars of any given, very unequal magnitudes, may eaſily be ſo arranged, in ſcattered, much extended, irregular rows, as to produce the above deſcribed picture; or, that ſtars, ſcattered about almoſt promiſcuouſly within the fruſtum of a given cone, may be aſſigned of ſuch properly diverſified magnitudes as alſo to form the ſame picture. But who, that is acquainted with the doctrine of chances, can ſeriouſly maintain ſuch improbable conjectures? To conſider this only in a very coarſe way, let us ſuppoſe a cluſter to conſiſt of 5000 ſtars, and that each of them may be put into one of 5000 given places, and have one of 5000 aſſigned magnitudes. Then, without extending our calculation any further, we have five and twenty millions of chances, out of which only one will anſwer the above improbable conjecture, while all the reſt are againſt it. When we now remark that this relates only to the given places within the fruſtum of a ſuppoſed cone, whereas theſe ſtars might have been ſcattered all over the viſible ſpace of the heavens; that they might have been ſcattered, even within the ſuppoſed cone, in a million of places different from the aſſumed ones, the chance of this apparent cluſter's not being a real one, will be rendered ſo highly improbable that it ought to be intirely rejected.

Mr. Michell computes, with reſpect to the ſix brighteſt ſtars of the Pleiades only, that the odds are near 500000 to 1 that no ſix ſtars, out of the number of thoſe which are equal in ſplendour to the fainteſt of them, ſcattered at random in the whole heavens, would be within ſo ſmall a diſtance from each other as the Pleiades are *.

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* Phil. Tranſ. vol. LVII, p. 246.

Taking it then for granted that the ſtars which appear to be gathered together in a group are in reality thus accumulated, I proceed to prove alſo that they are nearly of an equal magnitude.

The cluſter itſelf, on account of the ſmall angle it ſubtends to the eye, we muſt ſuppoſe to be very far removed from us. For, were the ſtars which compoſe it at the ſame diſtance from one another as Sirius is from the ſun; and ſuppoſing the cluſter to be ſeen under an angle of 10 minutes, and to contain 50 ſtars in one of its diameters, we ſhould have the mean diſtance of ſuch ſtars twelve ſeconds; and therefore the diſtance of the cluſter from us about ſeventeen thouſand times greater than the diſtance of Sirius. Now, ſince the apparent magnitude of theſe ſtars is equal, and their diſtance from us is alſo equal,—becauſe we may ſafely neglect the diameter of the cluſter, which, if the center be ſeventeen thouſand times the diſtance of Sirius from us, will give us ſeventeen thouſand and twenty-five for the fartheſt, and ſeventeen thouſand wanting twenty-five for the neareſt ſtar of the cluſter;—it follows that we muſt either give up the idea of a cluſter, and recur to the above refuted ſuppoſition, or admit the equality of the ſtars that compoſe theſe cluſters. It is to be remarked that we do not mean intirely to exclude all variety of ſize; for the very great diſtance, and the conſequent ſmallneſs of the component cluſtering ſtars, will not permit us to be extremely preciſe in the eſtimation of their magnitudes; though we have certainly ſeen enough of them to know that they are contained within pretty narrow limits; and do not, perhaps, exceed each other in magnitude more than in ſome ſuch proportion as one full-grown plant of a certain ſpecies may exceed another full-grown plant of the ſame ſpecies.

If we have drawn proper concluſions relating to the ſize of ſtars, we may with ſtill greater ſafety ſpeak of their relative ſituations, and affirm that in the ſame diſtances from the center an equal ſcattering takes place. If this were not the caſe, the appearance of a cluſter could not be uniformly encreaſing in brightneſs towards the middle, but would appear nebulous in thoſe parts which were more crowded with ſtars; but, as far as we can diſtinguiſh, in the cluſters of which we ſpeak, every concentric circle maintains an equal degree of compreſſion, as long as the ſtars are viſible; and when they become too crowded to be diſtinguiſhed, an equal brightneſs takes place, at equal diſtances from the center, which is the moſt luminous part.

The next ſtep in my argument will be to ſhew that theſe cluſters are of a globular form. This again we reſt on the ſound doctrine of chances. Here, by way of ſtrength to our argument, we may be allowed to take in all round nebulæ, though the reaſons we have for believing that they conſiſt of ſtars have not as yet been entered into. For, what I have to ſay concerning their ſpherical figure will equally hold good whether they be groups of ſtars or not. In my catalogues we have, I ſuppoſe, not leſs than one thouſand of theſe round objects. Now, whatever may be the ſhape of a group of ſtars, or of a Nebula, which we would introduce inſtead of the ſpherical one, ſuch as a cone, an ellipſis, a ſpheroid, a circle or a cylinder, it will be evident that out of a thouſand ſituations, which the axes of ſuch forms may have, there is but one that can anſwer the phænomenon for which we want to account; and that is, when thoſe axes are exactly in a line drawn from the object to the place of the obſerver. Here again we have a million of chances of which all but one are againſt any other hypo-

hypotheſis than that which we maintain, and which, for this reaſon, ought to be admitted.

The laſt thing to be inferred from the above related appearances is, that theſe cluſters of ſtars are more condenſed towards the center than at the ſurface. If there ſhould be a group of ſtars in a ſpherical form, conſiſting of ſuch as were equally ſcattered over all the aſſigned ſpace, it would not appear to be very gradually more compreſſed and brighter in the middle; much leſs would it ſeem to have a bright nucleus in the center. A ſpherical cluſter of an equal compreſſion within,—for that ſuch there are will be ſeen hereafter,—may be diſtinguiſhed by the degrees of brightneſs which take place in going from the center to the circumference. Thus, when a is the brightneſs in the center, it will be $\sqrt{a^2 - x^2}$ at any other diſtance x from the center. Or, putting $a = 1$, and $x =$ any decimal fraction; then, in a table of natural ſines, where x is the ſine, the brightneſs at x will be expreſſed by the coſine. Now, as a gradual encreaſe of brightneſs does not agree with the degrees calculated from a ſuppoſition of an equal ſcattering, and as the cluſter has been proved to be ſpherical, it muſt needs be admitted that there is indeed a greater accumulation towards the center. And thus, from the above-mentioned appearances, we come to know that there are globular cluſters of ſtars nearly equal in ſize, which are ſcattered evenly at equal diſtances from the middle, but with an encreaſing accumulation towards the center.

We may now venture to raiſe a ſuperſtructure upon the arguments that have been drawn from the appearance of cluſters of ſtars and nebulæ of the form I have been examining, which is that of which I have made mention in my "*Theoreti-*

" *cal view—Formation of Nebulæ—Form I**." It is to be remarked that when I wrote the paragraph I refer to, I delineated nature as well as I do now; but, as I there gave only a general ſketch, without referring to particular caſes, what I then delivered may have been looked upon as little better than hypothetical reaſoning, whereas in the preſent inſtance this objection is intirely removed, ſince actual and particular facts are brought to vouch for the truth of every inference.

Having then eſtabliſhed that the cluſters of ſtars of the 1ſt Form, and round nebulæ, are of a ſpherical figure, I think myſelf plainly authorized to conclude that they are thus formed by the action of central powers. To manifeſt the validity of this inference, the figure of the earth may be given as an inſtance; whoſe rotundity, ſetting aſide ſmall deviations, the cauſes of which are well known, is without heſitation allowed to be a phænomenon deciſively eſtabliſhing a centripetal force. Nor do we ſtand in need of the revolving ſatellites of Jupiter, Saturn, and the Georgium Sidus, to aſſure us that the ſame powers are likewiſe lodged in the maſſes of theſe planets. Their globular figure alone muſt be admitted as a ſufficient argument to render this point uncontrovertible. We alſo apply this inference with equal propriety to the body of the ſun, as well as to that of Mercury, Venus, Mars, and the Moon; as owing their ſpherical ſhape to the ſame cauſe. And how can we avoid inferring, that the conſtruction of the cluſters of ſtars, and nebulæ likewiſe, of which we have been ſpeaking, is as evidently owing to central powers?

Beſides, the ſtep that I here make in my inference is in fact a very eaſy one, and ſuch as ought freely to be granted. Have I not already ſhewn that theſe cluſters cannot have come to their preſent formation by any random ſcattering of ſtars? The doctrine of chance, by expoſing the very great odds againſt ſuch hypotheſes, may be ſaid to demonſtrate that the ſtars are thus aſſembled by ſome power or other. Then, what do I attempt more than merely to lead the mind to the conditions under which this power is ſeen to act?

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* Phil. Tranſ. vol. LXXV, p. 214.

In a caſe of ſuch conſequence I may be permitted to be a little more diffuſe, and draw additional arguments from the internal conſtruction of ſpherical cluſters and nebulæ. If we find that there is not only a general form, which, as has been proved, is a ſufficient manifeſtation of a centripetal force, what ſhall we ſay when the accumulated condenſation, which every where follows a direction towards a center, is even viſible to the very eye? Were we not already acquainted with attraction, this gradual condenſation would point out a central power, by the remarkable diſpoſition of the ſtars tending towards a center. In conſequence of this viſible accumulation, whether it may be owing to attraction only, or whether other powers may aſſiſt in the formation, we ought not heſitate to aſcribe the effect to ſuch as are *central*; no phænomena being more deciſive in that particular, than thoſe of which I am treating.

I am fully aware of the conſequences I ſhall draw upon myſelf in but mentioning other powers that might contribute to the formation of cluſters. A mere hint of this kind, it will be expected, ought not to be given without ſufficient foundation; but let it ſuffice at preſent to remark that my arguments cannot be affected by my terms: whether I am right to uſe the plural number,—central powers,—or whether I ought only to ſay,—the known central force of gravity,—my concluſions will be equally valid. I will however add, that the idea of other cen-

central powers being concerned in the conſtruction of the ſidereal heavens, is not one that has only lately occurred to me. Long ago I have entertained a certain theory of diverſified central powers of attractions and repulſions; an expoſition of which I have even delivered in the years 1780, and 1781, to the Philoſophical Society then exiſting at Bath, in ſeveral mathematical papers upon that ſubject. I ſhall, however, ſet aſide an explanation of this theory, which would not only exceed the intended limits of this paper, but is moreover not required for what remains at preſent to be added, and therefore may be given ſome other time, when I can enter more fully into the ſubject of the interior conſtruction of ſidereal ſyſtems.

To return, then, to the caſe immediately under our preſent conſideration, it will be ſufficient that I have abundantly proved that the formation of round cluſters of ſtars and nebulæ is either owing to central powers, or at leaſt to one ſuch force as refers to a center.

I ſhall now extend the weight of my argument, by taking in likewiſe every cluſter of ſtars or nebula that ſhews a gradual condenſation, or encreaſing brightneſs, towards a center or certain point; whether the outward ſhape of ſuch cluſters or nebulæ be round, extended, or of any other given form. What has been ſaid with regard to the doctrine of chance, will of courſe apply to every cluſter, and more eſpecially to the extended and irregular ſhaped ones, on account of their greater ſize: It is among theſe that we find the largeſt aſſemblages of ſtars, and moſt diffuſive nebuloſities; and therefore the odds againſt ſuch aſſemblages happening without ſome particular power to gather them, encreaſe exceedingly with the number of the ſtars that are taken together. But if the gradual accumulation either of ſtars or encreaſing brightneſs has before been admitted as a direction to the ſeat of power, the ſame effect will equally point out the ſame cauſe in the caſes now under conſideration. There are beſides ſome additional circumſtances in the appearance of extended cluſters and nebulæ, that very much favour the idea of a power lodged in the brighteſt part. Although the form of them be not globular, it is plainly to be ſeen that there is a tendence towards ſphericity, by the ſwell of the dimenſions the nearer we draw towards the moſt luminous place, denoting as it were a courſe, or tide of ſtars, ſetting towards a center. And—if allegoral expreſſions may be allowed—it ſhould ſeem as if the ſtars thus flocking towards the ſeat of power were ſtemmed by the crowd of thoſe already aſſembled, and that while ſome of them are ſucceſsful in forcing their predeceſſors ſideways out of their places, others are themſelves obliged to take up with lateral ſituations, while all of them ſeem equally to ſtrive for a place in the central ſwelling, and generating ſpherical figure.

Since then almoſt all the nebulæ and cluſters of ſtars I have ſeen, the number of which is not leſs than three and twenty hundred, are more condenſed and brighter in the middle; and ſince, from every form, it is now equally apparent that the central accumulation or brightneſs muſt be the reſult of central powers, we may venture to affirm that this theory is no longer an unfounded hypotheſis, but is fully eſtabliſhed on grounds which cannot be overturned.

Let us endeavour to make ſome uſe of this important view of the conſtructing cauſe, which can thus model ſidereal ſyſtems. Perhaps, by placing before us the very extenſive and varied collection of cluſters, and nebulæ furniſhed by my catalogues, we may be able to trace the progreſs of its operation, in the great laboratory of the Univerſe.

If theſe cluſters and nebulæ were all of the ſame ſhape, and had the ſame gradual condenſation, we ſhould make but little progreſs in this inquiry; but, as we find ſo great a variety in their appearances, we ſhall be much ſooner at a loſs how to account for ſuch various phænomena, than be in want of materials upon which to exerciſe our inquiſitive endeavours.

Some of theſe round cluſters conſiſt of ſtars of a certain magnitude, and given degree of compreſſion, while the whole cluſter itſelf takes up a ſpace of perhaps 10 minutes; others appear to be made up of ſtars that are much ſmaller, and much more compreſſed, when at the ſame time the cluſter itſelf ſubtends a much ſmaller angle, ſuch as 5 minutes. This diminution of the apparent ſize, and compreſſion of ſtars, as well as diameter of the cluſter to 4, 3, 2 minutes, may very conſiſtently be aſcribed to the different diſtances of theſe cluſters from the place in which we obſerve them; in all which caſes we may admit a general equality of the ſizes, and compreſſion of the ſtars that compoſe them, to take place. It is alſo highly probable that a continuation of ſuch decreaſing magnitudes, and encreaſing compreſſion, will juſtly account for the appearance of round, eaſily reſolvable, nebulæ; where there is almoſt a certainty of their being cluſters of ſtars. And no Aſtronomer can heſitate to go ſtill farther, and extend his ſurmiſes by imperceptible ſteps to other nebulæ, that ſtill preſerve the ſame characteriſtics, with the only variations of vaniſhing brightneſs, and reduction of ſize.

Other cluſters there are that, when they come to be compared with ſome of the former, ſeem to contain ſtars of an equal magnitude, while their compreſſion appears to be conſiderably different. Here the ſuppoſition of their being at different diſtances will either not explain the apparently greater compreſſion, or, if admitted to do this, will convey to us a very inſtructive conſequence: which is, that the ſtars which are thus ſuppoſed not to be more compreſſed than thoſe in the former cluſter, but only to appear ſo on account of their greater diſtance, muſt needs be proportionally larger, ſince they do not appear of leſs magnitude than the former. As therefore, one or other of theſe hypotheſes muſt be true, it is not all improbable but that, in ſome inſtances, the ſtars may be more compreſſed; and in others, of a greater magnitude. This variety of ſize, in different ſpherical cluſters, I am however inclined to believe, may not go farther than the difference in ſize, found among the individuals belonging to the ſame ſpecies of plants, or animals, in their different ſtates of age, or vegetation, after they are come to a certain degree of growth. A farther inquiry into the circumſtance of the extent, both of condenſation and variety of ſize, that may take place with the ſtars of different cluſters, we ſhall poſtpone till other things have been previouſly diſcuſſed.

Let us then continue to turn our view to the power which is moulding the different aſſortments of ſtars into ſpherical cluſters. Any force, that acts uninterruptedly, muſt produce effects proportional to the time of its action. Now, as it has been ſhewn that the ſpherical figure of a cluſter of ſtars is owing to central powers, it follows that thoſe cluſters which, *ceteris paribus*, are the moſt compleat in this figure, muſt have been the longeſt expoſed to the action of theſe cauſes. This will admit of various points of views. Suppoſe for inſtance that 5000 ſtars had been once in a certain ſcattered ſituation, and that other 5000 equal ſtars had been in the ſame ſituation, then that of the two cluſters which had been longeſt expoſed to the action of the modelling power, we ſuppoſe,

would

would be moſt condenſed, and more advanced to the maturity of its figure. An obvious conſequence that may be drawn from this conſideration is, that we are enabled to judge of the relative age, maturity, or climax of a ſidereal ſyſtem, from the diſpoſition of its component parts; and, making the degrees of brightneſs in nebulæ ſtand for the different accumulation of ſtars in cluſters, the ſame concluſions will extend equally to them all. But we are not to conclude from what has been ſaid that every ſpherical cluſter is of an equal ſtanding in regard to abſolute duration, ſince one that is compoſed of a thouſand ſtars only, muſt certainly arrive to the perfection of its form ſooner than another, which takes in a range of a million. Youth and age are comparative expreſſions; and an oak of a certain age may be called very young, while a contemporary ſhrub is already on the verge of its decay. The method of judging with ſome aſſurance of the condition of any ſidereal ſyſtem may perhaps not improperly be drawn from the ſtandard laid down page 218; ſo that, for inſtance, a cluſter or nebula which is very gradually more compreſſed and bright towards the middle, may be in the perfection of its growth, when another which approaches to the condition pointed out by a more equal compreſſion, ſuch as the nebulæ I have called *Planetary* ſeem to preſent us with, may be looked upon as very aged, and drawing on towards a period of change, or diſſolution. This has been before ſurmiſed, when, in a former paper, I conſidered the uncommon degree of compreſſion that muſt prevail in a nebula to give it a planetary aſpect; but the argument, which is now drawn from the powers that have collected the formerly ſcattered ſtars to the form we find they have aſſumed, muſt greatly corroborate that ſentiment.

This method of viewing the heavens ſeems to throw them into a new kind of light. They now are ſeen to reſemble a luxuriant garden, which contains the greateſt variety of productions, in different flouriſhing beds; and one advantage we may at leaſt reap from it is, that we can, as it were, extend the range of our experience to an immenſe duration. For, to continue the ſimile I have borrowed from the vegetable kingdom, is it not almoſt the ſame thing, whether we live ſucceſſively to witneſs the germination, blooming, foliage, fecundity, fading, withering, and corruption of a plant, or whether a vaſt number of ſpecimens, ſelected from every ſtage through which the plant paſſes in the courſe of its exiſtence, be brought at once to our view?

WILLIAM HERSCHEL.

Slough near Windſor, May 1, 1789.

Firſt Claſs. Bright nebulæ.

I.	1785	Stars.		M.	S.		D.M.		Ob	Deſcription.
94	April 28	61 Urſæ	f	0	6	n	2	17	2	cB. pL. E. ſp nf. vgmbM. $3\frac{1}{2}$ l. 2′b.
95	— —	— ——	f	35	0	n	2	7	2	cB. cL. E. np ſf. bM. 4′l. 3 b.
96	May 1	14 Canum	f	5	30	n	1	12	2	vB. cL. mE. ſp nf. ſmbM. 6′l. $1'\frac{1}{2}$ b.
97	—	— ——	f	7	58	n	0	47	1	vB. pL. E. nearly mer. gmbM.
98	—	— ——	f	36	50	ſ	0	12	1	cB. pL. R. vgmbM.
99	—	27 (γ) Bootis	p	13	46	ſ	1	46	2	vB. S. R. vſmbM.
100	Sept. 10	41 Ceti	f	13	43	n	0	48	1	cB. pS. R. mbM. See III. 431.
101	—	67 ——	p	17	19	n	0	25	2	cB. pL. E. near. mer. mbM. 5′ l.
102	—	— ——	f	21	37	ſ	0	13	2	cB. pL. R. mbM.
103	24	14 Delphini	p	16	10	ſ	0	3	1	vB. L. gmbM. er. beautif. object.
104	28	93 (Ψ) Aqua	f	1	8	n	0	42	1	cB. cL. E. near. mer. gmbM. F. rays.
105	Oct. 3	47 Ceti	f	26	24	ſ	0	37	1	cB. pL. iR. mbM.
106	—	89 (π) ——	f	38	10	ſ	1	24	2	cB cL. iR. bM. 3′ dia.
107	6	20 Eridani	f	4	3	ſ	1	4	2	vB. R. BNM. $1'\frac{1}{2}$ dia.
108	8	111 (ξ) Piſc^{m}	p	34	22	ſ	0	1	1	cB. vL. iR. p. vBſt.
109	26	12 Eridani	p	7	17	n	2	54	3	cB. pS. lE. mer. mbM. r. $1'\frac{1}{2}$ l.

110

I.	1785	Stars.		M.	S.		D.M.		Ob	Deſcription.
110	Nov. 27	9 Ceti	p	44	0	ſ	0	47	2	cB. cL. lE. gmbM. iF.
111	—	— —	p	43	3	ſ	0	6	2	cB. cL. iR. gmbM.
112	29	5 (γ) Arietis	f	5	48	ſ	0	17	1	vB. L. R. mbM. not er. 4′ dia.
113	Dec. 7	66 (4th σ) Can	f	18	22	n	1	34	2	cB. cL. lE. iF. mb foll. ſide.
114	—	18 Leo. min.	p	13	39	ſ	0	35	1	cB. cL. iF. mbM.
115	—	— — —	p	5	47	n	1	10	2	cB. pL. lE. iF. mbM.
116 117	—	37 — —	f	11	5	n	1	1	1	Two; the 1ſt, cB. cL. iE; the 2d, pB. pL. iE. Diſt. 1′ at the vertex.
118	—	46 Urſæ	p	3	41	ſ	1	32	1	cB. cL. iR. mbM.
119	28	31 (1ſt *d*) Vir	p	6	0	n	0	55	1	vB. pS.
120	31	30 (η) Crateri	p	9	0	n	0	17	1	cB. L. iR. bM. 5′ l. 4′ b.
	1786									
121	Jan. 1	13 (*n*) Virgin	p	18	15	ſ	0	19	1	vB. cL. lE. mbM. 3′ l. 2′½ b. bet. 2 pBſt.
122	Feb. 1	57 (μ) Eridani	p	4	0	n	0	22	1	cB. vL. iR. bM. er. 5 or 6′ dia.
123	2	60 (σ) Virg.	p	52	27	ſ	0	30	2	cB. S.
124	—	— — —	p	39	57	ſ	0	3	2	cB. cL. R.
125	—	— — —	p	39	12	ſ	1	6	2	cB. cL. E. mbM.
126	24	108 —	p	0	35	n	1	15	1	cB. mE. par. BN. 8 or 9′ l.
127	—	110 —	p	1	47	ſ	0	23	1	cB. pS. mbM.
128	—	— —	f	3	37	ſ	0	30	1	vB. pL. bM.
129	March 3	26 (χ) —	f	9	46	ſ	0	41	1	v brilliant. iR. vgmbM.
130	—	— — —	f	26	35	ſ	0	3	2	vB. lE. mer. BN. and F. br. 2′ l.
131	4	14 (ε) Crate.	f	0	29	n	1	3	1	cB. E. gbM. 5′ l. 4′ b.
132	19	26 Hydræ	f	1	44	n	0	4	2	cB. pL. lE. vgbM. 1′½ diam.
133	25	49 (*g*) Virgin.	p	16	4	n	0	18	1	cB. vS. BN.
134	—	— — —	p	13	27	n	0	13	1	cB. 7 or 8′ l. 3′ b.
135 136	27	68 (ι) —	p	32	2	n	0	11	2	Two; both cB. cS. R. mbM. Diſt. 1′ near. mer. chev. mixed.
137	28	41 Lyncis.	f	3	13	n	0	8	1	vB. R. vſmbM. chev. 3′ dia.
138	—	*1102 (*e*) Hy	f	33	45	n	1	27	1	cB. R. pſmbM. * See note.
139	April 17	11 (*s*) Virgin.	f	12	1	ſ	1	21	2	cB. vBN. r. 6 or 7′ dia.
140	—	— — —	f	39	55	ſ	0	31	2	cB. pL. mbM.
141	—	— — —	f	45	50	ſ	1	32	1	vB. cL. E. np ſf.
142	30	37 —	p	6	35	n	0	0	1	cB. pL. iR. gmbM.
143	—	43 (δ) Virgin	f	4	55	ſ	2	7	1	cB. np. pBſt. and cloſe to it.
144	—	109 —	p	25	58	n	0	54	1	cB. cL. R. gmbM.
145 146	—	— —	p	25	14	n	1	27	1	Two; the p. pB. pL. E. Diſt. 3 or 4′ ſp nf. The f cB. R. pL. Place of 2d.
147	—	43 Ophiuchi	p	8	54	ſ	1	17	1	vB. R. gmbM. 2′½ dia.
148	May 1	24 (α) Serpen	p	22	26	ſ	1	16	1	cB. cL. iR. bM.
149	28	40 (ρ) Ophiu	f	0	14	n	1	32	1	cB. pS. lE. er.
150	—	— — —	f	27	53	n	0	36	1	cB. R. vgmbM. about 1′½ dia.
151	Sept. 4	71 (ε) Piſcium	f	21	41	n	1	41	1	cB. cL. R. C. vgmbM. N.
152	—	24 (ξ) Arietis	p	16	23	n	0	20	2	vB. vS. R. or lE. vBN. 1′ ſf. cſt

I.	1786	Stars.		M.	S.		D.	M.	Ob	Deſcription.
153	Sept. 20	59 (2d υ) Ceti	p	23	16	ſ	0	6	1	cB. vL. E. ſp nf. above 15′ l.
154	21	14 Triang.	f	1	23	n	0	59	2	cB pL. E. np ſf. vgmbM. 3′ l. 2′ b.
155	30	32 Eridani	f	7	49	ſ	1	1	2	cB. S. gmbM.
156	Oct. 18	12 (q) Perſei	p	1	41	ſ	1	10	2	cB. mE. 12° ſp nf. vBN. near 10′ l.
157	26	90 (υ) Piſcium	f	28	9	n	0	13	1	cB. cL. E. par. mbM. 7′ l. 3′ b.
158	Nov. 26	48 (ν) Eridani	p	4	32	ſ	1	46	2	cB. pL. iR. vgmbM.
159	Dec. 11	20 (π) Caſſiop	f	8	30	n	0	33	3	vB. R. vgbM. 1′½ dia.
160	29	29 (γ) Virgin	p	6	17	ſ	2	19	2	vB. cL. E. ſp nf. vgBN. F. bran.
	1787									
161	Jan. 14	6 Comæ	f	12	58	ſ	0	55	1	vB. pL. iR.
162	—	29 ——	f	10	35	n	0	2	1	vB. E. ſp nf. Sſt in it ½′ p. N.
163	Feb. 22	20 Sextantis	p	8	29	ſ	0	22	1	eB. cL. mE. 45° ſp nf. N. 2′ l. F. br. 5′ l.
164	Mar. 17	38 Leo. min.	p	2	54	ſ	0	36	3	cB. E. 30° np ſf. mbM. er. 4′ l. 2′ b.
165	—	6 Canum	p	15	42	n	0	25	2	vB. BN. not M. or 2 joined the n. N.
166	—	— ——	p	1	20	n	0	23	2	vB. S. R. mbM.
167	18	10 (n) Urſæ	f	13	43	ſ	1	40	1	cB. R. BN. 1′½ dia.
168	—	34 (μ) ——	p	4	9	ſ	0	6	3	cB. R. vgbM. 8′ dia. cſt. in it, unconnected.
169	—	6 Canum	p	16	16	n	0	53	1	cB. cL.
170	—	20 ——	f	28	12	n	1	6	2	cB. E. near par. SNM. 2′ l.
171	—	53 (2d ν) Boot	p	49	57	n	1	10	2	cB. S. R. r. mbM.
172	19	31 Leo. min.	f	25	2	ſ	0	3	1	cB. E. ſp nf. few ſt. in p. 1 in n. unconnected.
173	—	— —— ——	f	86	19	n	0	23	1	vB. R. vgNM. 2′½ dia.
174	20	53 (ξ) Urſæ	f	46	14	n	0	24	1	cB. E. 5′ l. 1′½ b.
175	—	13 Canum	p	46	3	n	2	28	1	vB. S. R. mbM.
176 177	—	— ——	p	16	33	n	1	26	1	Two. The f. cB. E. mbM. The n. pB. E. ſp nf. Both join and form the letter S.
178 179	April 9	8 ——	f	7	36	ſ	0	12	1	Two. The n. vB. vmbM. The f. pB. Their nebul. run together.
180	—	20 ——	f	29	9	n	3	15	1	cB. mE. 60° np ſf. vſBM.
181	—	— ——	f	40	13	n	1	11	1	cB. cL. mbM.
182	11	1 Serpentis	p	17	22	ſ	0	2	2	cB. pL. iR. mbM.
183	—	— ——	p	11	19	n	0	1	2	cB. pL. iR. or lE.
184	May 7	8 Libræ	p	8	21	ſ	1	15	1	cB. pL. E. ſp nf. mbM.
185	11	19 (λ) Bootis	f	11	6	n	0	1	2	c or pB. S. R. pſmbM.
186	12	— — ——	p	47	14	n	1	20	2	cB. pL. R or lE. vgbM. 3′ np. the 51ſt of the *Conn. des Temps*.
187	—	— — ——	p	20	15	n	1	14	1	cB. E. 30° ſp nf. BN. vgF. branches.
188	—	38 (2d *h*) ——	p	13	24	n	2	44	2	cB. lE. par. mbM. F. bran. 1′½ l.
189	15	24 (*g*) ——	f	3	57	ſ	0	23	1	cB. cL. E. ſp nf. broad.

I.	1787	Stars.		M.	S.		D.	M.	Ob	Deſcription.
190 191	May 16	*Canum 6m.	f	11	32	f	1	11	1	Two. The f. cB. cL. The n. pB. S. diſt. 1′½. * See note.
192	Oct. 14	3 Lacertæ	p	80	46	n	2	32	3	cB. iF. 3′ l. 2′½ b. Nebuloſity.
193	Nov. 12	54 (φ) Andro	p	1	26	n	0	54	1	Two cloſe together. Both vB. diſt. 2′. ſp nf. One is 76 of the *Conn.*
	1788									
194	Jan. 14	56 Urſæ	f	3	19	n	0	5	2	vB. cL. mE. mer. BN. 6′l. 2′b. chev.
195	—	07 —	f	4	49	n	0	2	2	E. vBN. and F. branches.
196	—	— —	f	7	17	n	0	38	2	cB. cL. iF. vgbM. ſf. ſt.
197 198	—	8 Canum	p	3	32	n	0	19	1	Two. The f. vB. vL. iE. The n. B. pS. iF. diſt. 1′½.
199	15	15 Leo. min.	f	32	1	f	0	24	2	cB. mE. ſp nf. vgbM. 5′ l. 2 or 3′ b.
200	Feb. 5	59 (2d σ) Can	p	4	29	n	0	29	1	v brilliant. mE. ſp nf. 8′l. 3′b. beauti.
201	—	63 (χ) Urſæ	f	0	5	f	0	17	2	cB. mE. ſp nf. near. mer. 5′ l. 1′ b.
202	—	— — —	f	0	47	n	0	4	2	cB. S. lE.
203	6	59 —	f	7	42	n	0	31	1	cB. cL. R. pBNM.
204	March 9	9 (ι) —	p	16	27	n	2	7	1	cB. vS. lE. m.
205	—	— — —	f	22	18	n	3	1	1	vB. lbM. chev. bran. m. neb. 6′ l. 4′ b.
206	—	3 Canum	p	14	39	n	1	35	3	cB. E. 45° np ſf. 6′ l. 4′b. almoſt equally B.
207	—	— —	p	14	0	f	1	32	3	cB. mE. 70° ſp nf. 6 or 7′l. 2′b.
208	—	— —	p	9	9	n	1	32	3	cB. mE. ſp nf. SBNM. 5′ l. 1′ b.
209	—	— —	p	3	33	f	1	6	2	cB. cL. E. mbM.
210	April 1	60 Urſæ	f	46	0	n	0	9	2	vB. S. lE. near. par. BN. eF. bran.
211	—	11 Canum	f	5	47	f	1	58	3	cB. S. R. bM. f. vSſt.
212	10	60 Urſæ	f	50	50	f	1	58	1	cB. pL. E.
213	27	19 (λ) Bootis	p	110	25	f	1	48	1	v brilliant. cL. E. ſp nf. difficulty r. has 3 or 4 BN.
214	May 1	17 (κ) —	p	8	26	n	1	56	1	cB. cL. n. ends abruptly. f. vg.
215	5	Neb. II. 757.	p	3	27	f	1	14	1	vB. cL. E. f. 2 ſt.

Second claſs. Faint nebulæ.

II.	1785	Stars.		M.	S.		D.	M.	Ob	Deſcription.
403	April 26	1 Comæ	p	8	50	f	1	21	3	F. cL. iF. lbM.
404	27	5 —	p	11	40	f	0	29	1	pB. pL. R. C. mbM.
405	—	— —	p	1	0	f	0	24	2	pB. pL. iF. lE. bM. p. pcſt.
406	—	20 —	p	6	8	f	1	27	1	pF. pL. mbM. S neb. joined to it. or lb. in the n.
407	—	— —	f	6	44	f	1	35	1	pB. pS. lE.
408	28	61 Urſæ	f	7	54	n	0	46	2	F. S. R. gbM. near ½′ dia.
409	May 1	— —	f	33	54	n	2	25	2	pB. pL. vgbM. r.
410	—	14 Canum	p	32	8	f	0	14	2	pB. cL. R. ſmbM. r.

II.	1785	Stars.		M.	S.		D.M.		Ob	Deſcription.
411	May 1	14 Canum	p	24	25	ſ	0	43	2	pB. pL. R. lbM. 2′ np. pBſt.
412	—	— ——	p	17	8	ſ	0	26	2	F. S. lE. glbM. er.
413	—	— ——	p	0	50	ſ	0	36	2	pB. S. R. bM. and vſF. on the edges.
414	—	— ——	f	5	58	n	0	27	1	F. S. lE.
415	—	— ——	f	48	34	n	0	15	1	F. S iF.
416	—	— ——	f	58	10	ſ	1	8	2	pB. pL. iE. mbM.
417	—	— ——	f	58	18	ſ	0	47	1	pB. pL. iE. bM.
418	—	51 (μ) Bootis	p	69	38	ſ	1	48	1	pB. iR. mbM.
419	—	— — ——	p	68	31	ſ	0	37	1	F. pL.
420	—	— — ——	p	61	32	ſ	2	17	1	pB. vS. R. vgmbM.
421	—	— — ——	p	55	14	ſ	1	53	1	F. pL. iF.
422	—	— — ——	p	52	36	ſ	0	52	1	F. cL. iF. unequally B.
423	—	— — ——	p	47	57	ſ	0	37	1	pF. pS. iF. bM.
424	2	49 (δ) ——	p	83	12	n	0	31	1	F. pL. lbM.
425	5	34 (ω) Serpen	p	4	0	n	0	15	3	F. cS. iR. ſtellar.
426 427	Aug. 12	1 Aquarii	f	7	50	ſ	0	12	1	Two. The p. F. S. iR. mbM. The f. vF. vS. lbM. 3 or 4′ diſt. Place of 1ſt.
428	30	35 Pegaſi	f	6	22	n	0	47	2	pB. S. iR. lbM. r.
429 430	—	6 (γ) Piſcium	p	2	16	n	1	14	1	Two. The f. pB. mE. par. mbM. 4′ l. 1′ b. The p. vF. cS 3 or 4′ diſt. and p.
431	Sept. 10	92 (χ) Aqua	f	2	0	n	0	9	2	pB. S. lE. par. vgF. NM. 1′ l.
432	—	— — ——	f	22	5	n	1	9	4	pB. cL. E. 75° ſp nf. 3′ l.
433	—	41 Ceti	p	18	0	ſ	0	4	1	pB. pL. bM. i. parallelogram. mer.
434	—	— ——	p	14	23	n	1	18	1	F. S. iF. bM. r.
435	—	67 ——	p	15	52	ſ	0	27	1	F. S. iR. bM.
436	—	— ——	f	1	45	ſ	0	14	1	F. pS. lE. ſ. 2 or 3 uneq. ſt.
437	—	— ——	f	2	7	ſ	0	24	1	F. pS. lE.
438	—	— ——	f	4	33	n	0	54	2	pB. vL. iF. mbM. r.
439	26	59 (p) Pegaſi	f	8	34	ſ	0	30	1	pB. pS. mbM.
440	—	— — ——	f	9	1	ſ	0	30	1	pB. pS. bM.
441	—	— — ——	f	10	1	n	0	10	1	F. S.
442	Oct. 1	62 (η) Aqua	f	9	4	ſ	0	5	3	F. S. r. lbM. or f. M.
443	—	— — ——	f	15	19	ſ	1	29	2	F. S. iR. lbM. 1′½ ſ. S. ſt.
444	—	20 Ceti	p	10	20	ſ	0	24	1	F. pL. lbM.
445	—	— ——	p	6	50	ſ	0	35	1	F. iF. er. 1′ b.
446	—	— ——	p	2	16	ſ	0	45	2	pB. S. R. mbM. m.
447	—	34 ——	f	1	3	n	2	0	2	F. S. Two more near it. See III. 592. 593.
448 449	—	43 ——	f	3	28	ſ	0	53	1	Two. Both ſtellar. within 1′ diſt. Nebuloſities run together.
450 451	3	71 (1ſt τ) Aqu	f	11	10	n	0	45	2	Two Both F. S. lE. different direc- tions. er. 2 or 3′ from each other.
452	—	18 Ceti	p	5	33	ſ	0	59	1	pB. pS. mbM. r. ſt. 1′½ diſt.
453	5	63 (κ) Aqua	f	13	50	ſ	1	19	1	F. pL. E. par. r.

II.	1785	Stars.		M.	S.		D	M.	Ob	Deſcription.
454	Oct. 5	90 (φ) Aqua	f	3	11	n	1	17	1	F. S. almoſt ſtellar.
455	—	17 Eridani	f	11	19	n	0	26	2	Two. The p. pB. cL. E. lbM.
456				11	46		0	25		The f. eF. vS. E.
457	—	61 (ω) ——	p	4	31	ſ	0	2	2	F. cL. lbM.
458	6	20 ——	f	8	52	ſ	0	46	1	pB. R. bM.
459	—	— ——	f	9	14	ſ	1	4	1	F. R. lbM.
460	—	— ——	f	12	7	n	1	6	1	pB. S. lE. mbM. N.
461	8	111 (ξ) Piſciu	p	28	48	ſ	1	32	3	F. pL iR. vgbM. 1′$\frac{1}{2}$ dia.
462	—	— — ——	p	27	52	ſ	1	32	2	pB. R. vgbM. 1′$\frac{1}{4}$ dia.
463	—	— — ——	p	26	40	ſ	1	15	3	F. S. ilE. par. mbM.
464	—	44 Eridani	p	9	2	n	0	0	1	F. vS. r.
465	9	82 (δ) Ceti	f	7	12	ſ	0	34	3	F. pL. iR. lbM.
466	—	— — ——	f	7	4	ſ	0	49	3	pB. cL. iR. mbM.
467	25	7 (b) Piſcium	p	4	23	n	1	22	1	pB. pL. iF.
468	—	26 ——	f	0	11	ſ	1	10	1	F. pL. iF. r.
469	26	49 Aquarii	f	5	14	ſ	0	4	1	F. pS. lE er. ſome of the ſt. viſible.
470	Nov. 22	67 Ceti	f	37	51	ſ	3	27	2	pB. S. ſtellar.
471	23	34 Piſcium	f	20	53	ſ	0	55	1	F. iF. lbM.
472	27	18 Ceti	f	2	18	n	1	24	1	F. pS.
473	—	47 ——	f	6	3	n	0	54	1	F. S. iF. er. ſome of the ſt. viſible.
474	—	72 (ϱ) ——	p	9	28	n	0	56	2	pB. pL. lE. lbM.
475	—	83 (ε) ——	f	24	23	ſ	0	3	1	pF. pL. iF. bM.
476	28	58 Aquarii	f	2	43	n	0	31	1	F. pL. iR. lbM.
477	—	70 ——	p	2	28	ſ	0	27	1	pB. pL. iR. lbM.
478	—	17 Ceti	p	10	10	n	0	53	1	pB. L. lE. lbM.
479	—	— ——	p	5	13	n	1	35	1	pB. mE. mer. 2′ l.
480	—	— ——	p	2	34	n	0	34	1	F. pL. lE. lbM.
481	—	53 (χ) ——	p	0	24	n	0	23	1	pB. cL. R. 1′$\frac{1}{2}$ f. Sſt.
482	—	55 (1ſt ζ) ——	f	17	54	n	0	15	1	Four. The p. 2, both F. E. S. within 1′ diſt. par.
483										
484	—	— — ——	f	17	56	n	0	11	1	The f. two, both pF. pS. E. about 2′ diſt. and nearly mer.
485										
486	—	— — ——	f	20	13	n	1	5	1	F. S. E.
487	—	— — ——	f	37	18	ſ	0	7	1	F. cL. iF. lbM.
488	—	— — ——	f	49	13	ſ	0	50	1	F. S. iF. bM.
489	29	23 (2d θ) Arie	f	8	36	n	0	42	1	F. S. lE. contains 3 ſt. uncon.
490	Dec. 7	66 (4 σ) Canc	f	8	10	n	0	54	1	pF. mE. r. 3′ l. 1′$\frac{1}{2}$ b.
491	—	18 Leo. min.	p	13	13	ſ	0	30	1	pB. pL. iF. lbM.
492	—	— — ——	f	1	47	n	0	0	1	pB. pL. lE. near. par.
493	—	37 — ——	f	13	7	n	0	49	1	F. S.
494	—	46 Urſæ	p	3	47	ſ	0	36	1	pB. pL. iR.
495	28	3 Leonis	f	3	34	n	0	16	1	F. pL. E. iF.
496	—	9 (o) Virgin	f	11	52	ſ	1	5	1	F.
497	—	31 (ſt d) ——	p	14	27	n	1	25	1	pF. vS.

II.	1785	Stars.		M.	S.		D.	M.	Ob	Deſcription.
498	Dec. 28	31 (1ſt *d*) Vir	p	12	30	n	1	3	1	F. pL.
499	—	— — —	p	10	55	n	1	18	1	F.
500	—	— — —	p	7	43	n	1	24	1	vL. er. ſome ſt. viſible.
501	30	52 (τ) Ceti	f	4	36	n	1	1	1	F. S. R. vSpBN.
502	—	76 (σ) —	f	29	37	n	0	30	1	F. eS. ſtellar. p. pBſt.
503	—	— — —	f	31	37	ſ	0	15	1	pB. S. iF. mbM.
504	—	20 Eridani	p	30	24	n	1	44	1	pB. S. lE. mbM.
505	31	9 Hydræ	f	34	16	ſ	0	15	1	pB. S. lE. ſp nf. ſmbM.
506	—	— —	f	49	32	ſ	0	37	1	pB. S. lE. lb ſfM.
507	—	4 (ν) Crater	f	18	25	ſ	0	3	1	F. S. E.
508	—	30 (η) —	f	4	26	ſ	0	41	1	pB. S. lE. bM.
509	—	— — —	f	6	52	n	0	46	1	F. cL. iR. lbM.
510	—	53 Virginis	f	2	58	ſ	0	25	1	F. lE. 1′½ l.
511	—	— —	f	3	21	ſ	0	12	2	pB. pL. R. bM.
512	—	— —	f	3	55	ſ	0	12	2	F. S.
513	—	— —	f	4	53	ſ	0	27	2	pB. pL. iF. mbM.
	1786									
514	Jan. 1	49 Eridani	p	0	34	ſ	1	9	1	F. pL. E. ſp nf. 2′ l. 1′ b.
515	—	— —	f	2	57	ſ	1	33	1	F. or pB. S. bM.
516	—	— —	f	21	45	ſ	1	16	1	F. S. iR. lbM.
517	—	29 (γ) Virgin	f	19	8	n	1	22	2	pB. pL. R. bM.
518 }	2	13 Canum	p	44	34	n	2	49	2	Two. The p. F. S. E. The f. F. S. E. in a different direction.
519 }				44	31		2	51		
520	27	7 (η) Hydræ	f	24	25	n	0	7	2	F. S. lE. par. er.
521	—	77 (σ) Leonis	p	3	42	ſ	1	28	3	F. vS. iF. ſmbM. er.
522	30	47 Eridani	f	6	29	ſ	0	21	1	F. pS. iE. r. 1′ ſp. Sſt.
523	—	— —	f	10	15	ſ	0	17	1	F. vS. iR. bM. almoſt ſtellar.
524	Feb. 1	57 (μ) —	p	9	24	n	0	3	1	F. S. iF. lbM. p. 2 Sſt.
525	—	— — —	p	4	5	n	1	27	1	F. pL. lE.
526	—	— — —	f	0	16	n	0	51	1	F. cS. R. lbM.
527	—	— — —	f	7	30	n	0	12	2	pB. S.
528	—	— — —	f	7	40	n	0	12	1	F. S. lbM.
529	—	28 (A) Hydr	p	26	37	n	0	8	1	F. S.
530	2	60 (σ) Virg	p	52	32	n	0	19	1	F. S.
531	—	— — —	p	47	19	ſ	1	12	2	pB. pL. E. b. ſ. M. 3′ l.
532	—	— — —	p	35	12	ſ	1	28	2	F. pL. lbM.
533	—	64 — —	f	26	8	ſ	1	17	2	F. pL. vlbM. 6 or 7′ l. 4′ b.
534	—	— —	f	34	2	ſ	0	15	2	pB. vL. glbM.
535	24	10 (r) —	f	43	43	ſ	0	39	1	F. mE. np ſf. 2′ l. ¾ b.
536	—	— — —	f	48	21	ſ	0	21	1	pB. mE. mbM. 2′½ l. 1′ b.
537	—	92 —	p	46	53	n	0	43	1	F. pL. iR. er.
538	—	108 —	p	1	8	n	0	59	1	pB. cL iR.
539	—	110 —	p	2	58	ſ	0	11	1	pB. cL. lE. gbM.
540	—	— —	f	1	11	ſ	0	53	1	pB. S. mbM.
541	—	— —	f	2	31	ſ	0	28	1	F.

II.	1786	Stars.		M.	S.		D.M.		Ob	Deſcription.
542	Feb. 24	110 Virg	f	2	31	n	0	0	1	pB.
543	—	—— ——	f	4	14	ſ	0	34	1	F.
544	—	—— ——	f	4	52	n	0	27	2	pB. vS.
545	—	—— ——	f	6	51	ſ	1	39	4	pB. S. iE. lbM.
546 547	Mar. 3	6 (*b*) Leonis	p	6	16	n	1	42	1	Two. Both F. S. The place inaccurate in RA.
548	—	14 Virginis	p	10	27	ſ	0	8	1	F. pL. mE. np ſf. but near. par.
549	—	26 (χ) ——	f	17	34	ſ	0	33	1	pB. vL. iF. lbM.
550	4	14 (ε) Crate	p	4	13	n	0	35	2	Two. Both F. S. lbM. cBſt. between, but 1′½ ſ. of them.
551				4	0		0	36		
552	—	21 (θ) ——	p	2	24	ſ	0	2	1	F. pS. iR. f. vSſt.
553	—	—— —— ——	f	11	21	ſ	1	9	2	pB. pL. iF. gbM. ſp. is Sſt.
554	18	1 Cancri	f	4	36	ſ	0	4	2	pB. pL. er. vgmbM.
555	19	26 Hydræ	f	7	26	n	0	21	2	pB. pL. iR. b. ſ. M.
556	20	6 (3d *b*) Crat	p	76	10	ſ	1	11	3	pB. cL. iR. vgmbM.
557	24	16 (ζ) Hydræ	f	3	21	n	0	22	1	F. mE. unequally B. 3′l. 1′b.
558	25	21 (*q*) Virgin	f	10	43	ſ	0	38	1	F. E. mer. 3′l. f. cBſt.
559	—	49 (*g*) ——	p	14	43	n	1	33	1	F. S.
560	—	—— —— ——	p	13	0	n	0	31	1	pF. pS. iR.
561	—	—— —— ——	p	3	39	n	0	24	1	pB. pL. R. vgmbM.
562	27	16 (κ) Crater	f	4	56	ſ	1	54	2	F. S. iR. bM. r.
563	—	68 (ι) Virgin	p	29	28	ſ	0	55	1	pB. iF. bM.
564	28	19 Urſæ	p	3	1	n	0	23	1	pB. S. R. mbM.
565	—	46 Leo. min.	p	5	3	n	0	28	1	pB. cL. iF. lbM.
566	—	*1102 (*e*) Hy	f	35	28	n	0	53	1	F. pS. E. * See note.
567	—	—— —— ——	f	37	17	n	0	51	1	pB. pL. iF. gbM.
568 569 570 571	Apr. 17	11 (*s*) Virgin	f	10	14	n	0	34	1	Four nebulæ. They are ſcattered about. The place is that of the laſt.
572	—	—— —— ——	f	11	34	ſ	0	26	1	A nebula.
573	23	—— —— ——	f	10	18	ſ	0	26	1	A nebula, cloudy.
574	2[illegible]	3 Serpentis	p	40	48	ſ	0	20	1	F. S. lE. r. p. 2 vcſt.
575	—	—— ——	p	36	3	n	0	33	1	pB. cL. iR. mbM.
576	—	—— ——	p	21	26	ſ	0	54	1	F. S. lE. like 2 ſtellar. joined cloſely.
577	30	37 Virginis	p	11	22	n	0	4	1	F. S. making a triangle with 2 Bſt.
578	—	—— ——	p	2	29	n	0	20	1	F. S.
579	—	109 ——	p	26	11	n	2	10	1	pB. cL. E.
580 581	—	—— ——	p	16	35	n	1	24	1	Two. The ſ. pB. pL. R. gbM. The n. eF. cL. diſt. 2′. The place is of 1.
582	—	—— ——	p	8	33	n	0	25	1	F. mE. r. 2′l. ¼ b. f. ſt 6m. 16″ in time.
583	May 3	14 (1ſt A) Ser	f	17	48	ſ	1	2	2	pB. S. E. nearly par. bM.
584	2[illegible]	5 (*g*) Ophiuc	f	27	48	n	1	8	1	pB. cL. gbM. er. undoubtedly ſt.
585	27	3 Serpentis	p	5	43	f	1	52	1	F. S. iE. r.
586	28	40 (ξ) Ophiuc	f	28	13	n	0	57	1	pB. S. iF.

II.	1786	Stars.		M.	S.		D.	M.	Ob	Deſcription.
587	June 3	61 Ophiuchi	f	0	23	n	0	36	1	F. cL. iF.
588	Sept. 4	24 (ξ) Ariet	p	39	40	ſ	0	17	2	F. S. lE r. bM.
589	—	— — ——	p	36	21	n	0	50	2	F. pL. E. b. f. M. 2′ ſp. cBſt.
590	18	2 Piſcium	f	2	2	n	0	48	1	F. S. bM.
591	—	88 (γ) Pegaſi	p	4	29	n	0	38	1	F. pL. iF. unequally B.
592	—	85 Ceti	p	3	19	n	0	5	1	pB. S. E. bM.
593	20	54 Eridani	p	61	14	n	0	43	1	pB.pS.R.reſembling I.107.but leſs.
594	—	— ——	p	55	40	n	0	10	1	pB. vS. R. bM.
595	23	66 Aquarii	p	41	2	ſ	0	1	2	F. cL. l and iE. nearly par. lbM.
596	30	51 Ceti	f	10	14	n	0	51	1	F. S. bM. 1′ ſ Sſt.
597	—	32 Eridani	p	8	30	ſ	1	10	2	F. S. E. iF. in a row with ſome ſt.
598	Oct. 13	59 (υ) Aqua	f	13	11	ſ	1	39	1	pB. pL. iR, vgmbM.
599	17	77 Cygni	f	20	15	ſ	0	6	1	F. pS. E. er.
600	—	10 Androme	f	2	5	ſ	1	14	2	pB.mE.np ſf. but near.mer.lbM. r. 5′ l. 1′½ b. alſo ob. 1784.,
601	—	26 (β) Perſei	p	15	16	n	1	14	1	F. S. iF. r.
602	—	— — ——	p	13	38	n	0	34	1	F. pS. iR. lbM.
603	—	— — ——	f	11	27	n	0	35	1	pB. ſtellar. or pcſt. with S. vF. chev.
604	18	59 Androme	p	2	10	ſ	0	17	1	pB. cL. lE. mbM.
605	—	— ——	p	0	54	n	0	9	1	pB. S. iF.
606	24	6 Lacertæ	p	17	44	n	2	18	3	F. S. er. or rather a patch of ſt.
607	—	30 Perſei	p	12	50	ſ	1	44	1	F. cL. E.
608	—	— ——	p	11	45	n	0	19	1	F. cL. er. ſome ſt. viſible.
609	26	65 (ι) Piſcium	p	1	55	ſ	0	6	1	pB. S. iR. gbM.
610	—	90 (υ) ——	f	24	26	n	1	31	1	F. S. bM. r.
611	—	— — ——	f	27	38	n	0	41	1	F. S. lE.
612	—	10 (α) Triang	p	28	30	ſ	1	8	1	pB. pL. lE. nearly par. mbM.
613	—	— — ——	p	4	46	ſ	0	47	1	F. S. lE. par. bM.
614 615	—	34 (θ) Gemin	p	5	37	ſ	0	25	1	Two. The ſ. F. S. R. bM. The n. F. cS. R. bM.
616	—	66 (α) ——	f	9	32	ſ	0	11	1	F. S. lbM.
617	Nov. 13	6 (β) Arietis	p	3	55	n	0	56	1	F. cL. vglbM.
618	—	— — ——	p	3	23	n	1	45	1	vS. ſtellar.
619	—	52 ——	p	5	39	ſ	0	3	1	pB. cL. pmE. mer. r. 1′ ſ. ſt.
620	Dec. 11	27 (κ) Perſei	p	5	48	n	1	31	2	F. S. iR. bM. L. ſtellar.
621	13	34 Ceti	p	23	45	ſ	0	34	1	F. E. np ſf. lbM. 1′½ l.
622	20	26 ——	f	9	8	ſ	0	22	1	F. R. bM. er.
623	21	2 (ε) Corvi	p	16	4	ſ	0	33	2	F.S.E.mer. or few deg.np ſf.lb.ſ.M.
624	29	1 Sextantis	f	8	54	ſ	1	8	1	F. lE. nearly par. 1′½ l.
625	—	29 (γ) Virgin	p	17	56	ſ	1	58	2	pB. mE. 20° ſp nf. 2′ l.
626	30	77 (σ) Leonis	p	4	44	ſ	1	30	1	pB. S. lE. mbM.
	1787									
627	Jan. 11	55 (δ) Gemi	f	54	51	ſ	0	26	3	F. S. iF. lE. ſp nf.
628	14	6 Comæ	f	6	36	n	0	38	1	pB. cL. E.
629	—	— ——	f	13	46	ſ	0	49	1	F.

630

II.	1787	Stars.		M.	S.		D.M.		Ob	Deſcription.
630	Jan. 14	6 Comæ	f	13	20	f	0	56	1	cL.
631	—	— —	f	16	3	f	1	31	1	F.
632	—	29 —	p	8	57	n	1	12	1	F. pL. R. vgbM.
633	17	16(1ſt *p*) Perſ	p	7	2	f	1	1	1	F. cL. lbM. 4′ dia.
634	Feb. 13	33 (η) Cancri	p	12	7	n	0	34	1	F. S. bM.
635	22	21 (θ) Crater	p	13	5	n	1	9	1	F. pS. iR. vgbM.
636	—	65 Virgin.	p	43	8	f	0	49	1	F. vL. bM.
637	March 11	44 (*k*) —	f	12	41	f	0	36	1	F. cL. iR. lbM. time inaccurate.
638	15	*11 39 (*r*) Ce	f	22	49	f	0	12	1	pB. S. lE. ſp nf. * See note.
639	17	32 Leo. min.	p	16	31	f	0	11	1	pB. cS. r.
640	—	— — —	p	16	11	f	0	18	1	F. vS. r. with 300 the ſame.
641	—	38 —	f	2	41	f	0	36	2	F. vS.
642	—	6 Canum	p	15	18	n	0	30	2	pB. S. E.
643	—	10 —	p	0	37	f	2	11	1	F. pL. gbM. r.
644	—	— —	f	2	55	f	1	1	1	pB. S. R. mbM. among ſcattered ſt.
645	—	— —	f	4	33	f	1	2	1	pB. S. R. mbM.
646	—	17 —	f	12	21	n	0	12	1	pB. L. iF. uneq. B. 3. or 4′ dia.
647	—	12 (λ) Coronæ	f	33	4	n	1	27	1	F. S. iE.
648	18	53 (2d ν) Boot	p	55	31	n	1	11	2	pB. pL. lbM.
649	—	— — —	p	54	11	f	0	13	2	F. S. E. nearly mer. r.
650	—	— — —	p	16	19	n	1	13	3	pB. E. BNM. and F. br. 2′l. ¼ b.
651	—	— — —	p	5	42	n	0	51	2	pB. pL. iE. er.
652	—	30 (*g*) Hercul	p	0	57	f	0	57	1	F. pL. r.
653	19	70 Virginis	p	4	21	n	0	11	1	pB. vS. mbM. juſt p. pcſt.
654	—	9 Serpentis	f	7	56	f	0	28	1	F. E. np ff. 1′½ l.
655	—	— —	f	15	44	n	0	16	1	F. E. mer. 1′½ l.
656	—	— —	f	16	59	f	1	17	1	pB. E. np ſf. bM. 1′½ l.
657	—	28 (β) —	f	8	2	f	0	52	1	F. iF. bM. 1′¼ dia. between 2Bſt.
658	20	44 Lyncis	p	47	39	f	0	23	1	pF. vS. mbM.
659	—	13 Canum	p	18	44	n	1	47	1	F. S. R. juſt np. V. 42.
660	April 9	8 —	f	7	58	f	0	5	1	pB. pL. R. mbM.
661	—	— —	f	9	42	f	0	20	1	pB. vS. ſtellar. juſt p. Sſt.
662	—	— —	f	15	2	n	0	36	1	F. S. R. bM.
663	—	19 —	p	9	58	n	0	56	1	pB. vS. ſtellar. near and n. Sſt.
664	—	— —	p	3	47	n	3	13	2	pB. mE. ſp nf. near. mer. 5′ l. ¾ b.
665	—	20 —	f	2	52	n	2	31	1	pB. cS. E. with 300 ſt. with burrs.
666	—	— —	f	5	24	n	2	30	1	pB. S. iR. mbM.
667	—	— —	f	7	35	n	2	42	1	pB. vS. lE. bM.
668	—	— —	f	27	51	n	0	51	1	F. E. par. miniature of I. 170.
669	—	— —	f	33	20	n	0	41	1	pB. pL. vgmbM.
670	—	— —	f	35	10	n	2	37	1	pB. pL.
671	—	— —	f	37	51	n	0	35	1	pB. pL. E.
672	—	— —	f	43	59	n	0	17	1	pF. pS. bM.
673	—	— —	f	66	36	n	1	0	1	F. pL. E. vlbM.
674	—	— —	f	71	16	n	0	27	1	pB. E. nearly par. 1′½ l. ½ b.

II.	1787.	Stars.		M.	S.		D.	M.	Ob	Deſcription.
675	April 9	20 Canum	f	80	7	n	0	51	1	F. vS.
676	—	— —	f	98	12	n	1	42	1	pB. vS. ſtellar.
677	—	— —	f	99	9	n	1	39	1	F. pS. lbM.
678	—	— —	f	117	42	n	1	1	1	F. S. r. in a row with 3 ſt.
679	11	79 (ζ) Virgin	p	4	17	f	1	1	2	Two. The p. F. pS. iF.
680				4	7		1	4		The f. pB. pL. iF. bM.
681	—	1 Serpentis	p	19	44	f	0	7	2	pB. pL. iF.
682	—	— —	p	16	35	f	0	4	2	pB. cS. lE.
683	—	— —	f	0	49	f	0	55	1	pB. pL. R. mbM. ſf. cſt.
684	—	4 —	p	6	6	n	0	7	1	Two. The 2d pB. S. iE. for the 1ſt ſee II. 545.
685	15	90 (*p*) Virgin	p	2	37	f	0	44	2	F. pL. iR. f. and par. with 2Fſt.
686	—	— — —	p	0	37	n	0	4	2	pB. S mbM.
687	—	102 (1ſt *v*) —	p	6	18	f	0	57	2	pB. cL. mE. 20° ſp nf.
688	May 11	19 (λ) Bootis	p	30	37	n	0	7	2	F. mE. 15° ſp nf. lbM. 4′ l. ¾ b.
689	12	— — —	p	47	20	n	0	46	3	pB. pL. R. mbM.
690	—	22 (τ) Hercu	f	7	2	n	2	3	2	F. pL. iF. gbM.
691	15	85 (η) Urſæ	f	15	34	f	0	12	1	pB. pL. E. nearly par. mbM.
692 693	—	— — —	f	19	36	n	1	20	1	Two. The p. F. pS. R. vgbM. The f. F. vS. ſtellar. ſmbM. diſt. 2′½.
694	—	24 (*g*) Bootis	p	6	31	n	0	43	1	pF. pS. lE. mbM.
695	—	— — —	f	1	7	f	0	12	1	pB. cL. iR. vgmbM.
696	—	— — —	f	3	40	n	0	3	1	pB. S. E.
697	16	*C Canu. 6m	f	6	23	f	0	39	1	F. E. par. bM. 1′½ l. 1′ b. *See note.
698	—	— — —	f	10	0	f	0	58	1	F. S. R. vſmbM.
699	—	— — —	f	13	19	n	0	20	3	F. pL. R. lbM. 1′½ dia.
700	—	27 (γ) Bootis	f	5	15	n	0	9	1	pF. S. iE.
701	—	25 Herculis	f	17	43	f	0	40	1	pB. pS. E. ſp nf. vgmbM.
702	Sept. 11	68 (2d *g*) Aqu	f	4	23	f	1	1	1	pF. pL. E. np ſf. but near. par. mbM. 1′½ l.
703	—	*A Ceti 7m	f	4	47	n	1	7	1	F. cL. E. * See note.
704	16	47 Caſſiop	f	61	37	n	3	48	2	F. pL. mE. np ſf. mbM.
705	Nov. 3	25 Cephei	f	21	6	f	1	35	1	pB. S. iR. er. almoſt equally B.
706	—	1 (*e*) Caſſiop	f	6	26	n	2	5	2	pBM. 2cſt. involved in nebuloſity. 2′ l. 1′½ b.
707	30	19 (ξ) —	p	2	50	f	2	12	1	pB. vL. iR. vgmbM. r. 5 or 6 dia.
	1788									
708	Jan. 14	37 Lyncis	f	3	50	f	1	15	1	pB. S. ſtellar.
709	—	56 Urſæ	p	6	51	f	1	57	2	pB. S. lE. mer. bM.
710	—	27 (γ) Bootis	p	43	42	n	1	51	1	F. S.
711	—	— — —	p	42	47	n	1	50	1	pB. cL. iF.
712	—	— — —	p	41	48	n	1	25	1	F. S. R. bM.
713	—	— — —	p	39	13	n	2	12	2	pB. pL.
714 715	—	— — —	p	39	5	n	2	9	2	Two. Both pB. S. R. 2′ diſt. in the ſame mer.

II.	1788	Stars.		M.	S.		D.M.		Ob	Deſcription.
716	Jan. 14	27 (γ) Bootis	p	36	48	n	2	19	2	pB. L. iR. FN. mbM. 4 or 5′ dia.
717	15	15 Leo. min.	f	0	58	ſ	1	58	1	F. pL. iF. lbM.
718	—	45 (ω) Urſæ	p	2	24	n	0	32	2	pB. S. lE. the np. corner of a S. trapezium.
719	Feb. 3	32 Lyncis	p	20	34	ſ	0	16	1	F. pL. iR. bM.
720	—	34 (μ) Urſæ	p	2	13	n	1	29	1	F. vS.
721	—	— — —	p	1	57	n	1	26	1	F. vS. ſtellar.
722	—	— — —	p	1	43	n	1	27	1	F. vS. ſtellar.
723	—	13 Canum	p	73	0	ſ	0	22	1	pB. S. lE.
724	—	— —	p	65	22	ſ	0	44	1	F. vS.
725	—	— —	p	61	59	ſ	0	19	1	pB.E.ſpnf.but nearer mer.mbM.2′l
726	5	80 (π) Gemi	f	22	56	n	0	38	1	pF. pL. iR. lbM. r. ſ. 2 ſt. par.
727	—	59 (2 σ) Canc	p	13	13	n	1	47	1	pF. pL. iR. r.
728	—	60 Urſæ	p	25	2	n	1	32	2	pB. pL. vgmbM.
729	—	— —	p	20	38	ſ	1	4	2	F. cL. lE. par. lbM.
730	—	— —	p	5	27	n	0	14	1	pB. bM. r. 4′ l. 3′ b.
731	—	— —	p	0	54	n	1	5	2	pB. S. E. ſp nf.
732	—	— —	f	0	47	ſ	0	19	1	F. S. almoſt. betw. 2ſp. ſt. chev. touches them.
733	6	59 —	f	20	28	n	0	21	1	pB.mE.mer.pBSN.&vF.br.4′l.¾′b.
734	9	20 Lyncis	p	14	20	n	0	28	1	F.pL.iF.mbM.ſf. a triangle of S.ſt.
735	—	— —	p	12	44	ſ	1	37	1	F. ſtellar.
736	—	— —	p	11	9	ſ	0	3	1	pF. vS. lbM. r.
737	—	63 (χ) Urſæ	p	4	55	ſ	0	4	2	pF. pS. iR. lbM.
738	—	— — —	f	2	30	n	0	57	1	pB. pL. R. mbM.
739	—	— — —	f	2	50	n	0	56	1	F. vS.
740	—	— — —	f	5	48	n	0	56	1	pF. pS. ſtellar.
741	—	— — —	f	17	7	n	0	53	1	pF. S. R. gbM.
742	—	3 Canum	p	1	50	ſ	1	35	2	F. S. E.
743	—	— —	f	5	22	ſ	0	10	1	F. S.
744	—	— —	f	21	50	n	1	27	2	pF. S. er.
745	April 1	Neb. II. 728.	p	35	22	ſ	0	57	2	pF.pS.E.ſ.&lp.ſt. among ſt. not con.
746	8	54 Virginis	p	0	24	ſ	0	43	1	pB. S. pBN.
747	10	60 Urſæ	f	31	58	ſ	0	24	1	pB. E. 15 or 20° np ſf. 3′ l.
748	—	— —	f	38	3	n	0	16	1	pB. pL. E. ſp. and in a line with 2ſt.
749	—	— —	f	47	57	ſ	1	10	2	pB. pL. iF.
750	27	19 (λ) Bootis	p	109	46	ſ	1	1	1	pF. pL. E. ſp nf.
751	—	37 (ξ) —	f	16	12	n	0	25	2	Two. The p.cF.cS. The f.pF.pL. Both lE. np ſf. but nearer par.
752				16	20		0	24		
753	28	27 (β) Hercul	f	2	50	ſ	1	42	1	pF. pS. vlE. mbM.
754	29	27 (γ) Bootis	p	11	15	n	1	27	1	pB. pL. R. FN.
755	May 1	23 (θ) —	f	44	59	n	0	31	1	pB. pL. lE.
756	5	Neb. II. 757.	p	11	47	ſ	3	7	2	pB. pL. iF. r.
757	—	12 (ι) Draco	p	16	38	ſ	1	56	3	pB. S. iR. or lE. mbM.
758	—	Neb. II. 757.	f	5	28	ſ	1	31	1	pF. pS. iR.

II.	1788	Stars.		M.	S.		D.M.		Ob	Deſcription.
759	May 5	Neb. II. 757.	f	6	6	f	0	42	1	pB. FNM. 8 or 10′ l. 2′ b.
760	—	— —	f	6	29	f	1	37	1	pF. pS. R.
761	—	— —	f	24	8	f	0	33	1	pF. pS. iF.
762	—	— —	f	24	37	f	0	25	1	pF. pL. E.
763	25	12 (ι) Draco	p	13	7	n	0	54	2	pB. mE. nearly mer. 2′ l. ½′ b.
764	—	— —	f	13	58	n	0	20	1	pB. S. iR. one p. ſuſpected vF. lE.
765	—	— —	f	14	36	f	0	58	1	pF. cS.
766	—	— —	f	15	0	n	0	18	1	pB. cL. iE. r.
767	June 6	31 (1ſt ψ) —	p	31	23	n	0	15	1	pB. pL. R. vgmbM.
768	Nov. 4	14 Camelop	p	42	52	n	1	57	1	pB. S. lE. BN. juſt f. pB. ſt.

Third claſs. Very faint nebulæ.

III.	1785	Stars.		M.	S.		D.M.		Ob	Deſcription.
377 378	April 26	92 Leonis	f	3	6	f	1	24	2	Two. The n. F. S. lbM. The f. vF. vS. diſt. 5′ ſp. the place of n.
379	—	1 Comæ	p	10	26	f	0	6	3	vF. vS. lE. er. or S. patch of ſt.
380	—	— —	p	8	56	f	1	7	2	F. S.
381	—	— —	p	7	56	f	1	12	1	vF. R.
382 383 384	—	2 —	f	1	58	f	0	49	2	Three. The place is of the laſt or moſt n. which is vF. S. The other two are ſp. eF. vS.
385	27	93 Leonis	p	2	54	f	0	35	1	vF. vS. r.
386	—	— —	p	3	10	f	0	27	1	vF. vS. r.
387	—	— —	p	2	10	f	0	27	1	vF. vS. r.
388	—	— —	p	1	48	n	0	11	2	vF. pL. iR. lbM. r. 7′ nf. cBſt.
389	—	— —	f	4	49	n	0	25	1	vF. vS.
390	—	5 Comæ	p	8	56	f	1	47	1	Suſpected.
391	—	— —	p	7	54	f	0	9	2	Six nebulæ. The places belong to the three firſt which are vF. vS. The other three are 10 or 12′ more ſouth, but there was not time to take their places. more ſuſpected.
392			p	7	56	f	0	13	2	
393			p	7	54	f	0	15	2	
394										
395										
396										
397	—	— —	f	3	36	n	0	5	2	vF. vL. iR. bM. 6′ l. 5′ b.
398	—	26 —	f	8	12	f	1	33	1	vF. vS. r.
399	28	61 Urſæ	f	31	26	n	1	57	2	vF. pL. lE. r.
400	May 1	— —	f	25	34	n	2	38	4	vF. vS. ſtellar. 2′½ n. Sſt.
401	—	14 Canum	f	2	36	f	0	36	1	vF. ſtellar. with 300 the ſame.
402 403	—	— —	f	19	23	n	0	35	1	Two. Both vF. cS. The place is that of the p. The 2d, 3′ nf.
404 405	—	— —	f	20	44	n	0	7	1	Two. Both vF. pS. The place is of the p. The 2d, 5 or 6′ nf.
406	—	— —	f	25	14	f	0	59	1	vF. vS. lE.

III.	1785	Stars.		M. S.		D.M.	Ob	Deſcription.
407	May 1	49 (δ) Bootis	p	102 40	n	1 37	2	Two. Both vF. vS. A ſtar between them about half way.
408				102 22		1 39		
409	—	14 Canum	f	30 38	f	0 17	1	vF. pL. R. lbM.
410	—	— —	f	35 6	n	1 1	1	vF. S. lE. er.
411	—	— —	f	54 30	f	1 8	1	eF. vS.
412	—	— —	f	54 45	n	0 25	1	vF. vS.
413	—	— —	f	58 30	f	0 53	1	vF.
414	—	51 (μ) Bootis	p	70 6	f	0 55	1	vF. mE.
415	—	— — —	p	65 4	f	1 57	1	eF. pL.
416 417	—	— — —	p	64 2	f	1 57	1	Two. Both vF. S. diſt. 6 or 7′. The place is that of the ff.
418	—	— — —	p	62 52	f	0 6	1	eF. ſtellar.
419	—	— — —	p	61 4	f	0 42	1	vF. vS. E. er.
420	—	— — —	p	54 54	f	0 50	1	vF. S.
421	—	— — —	p	49 26	f	0 40	1	vF. vS.
422 423	2	49 (δ) —	p	86 2	n	0 24	1	Two. Both eF. ſtellar. diſt. 4 or 5′. nearly mer. The n. fainteſt.
424	3	— — —	p	147 32	n	0 11	1	vF. ſtellar. or little larger.
425	—	— — —	p	101 48	n	1 39	1	vF. vS. in the field with III. 407. 408.
426	Aug. 30	17 (ι) Piſcium	p	8 48	f	1 42	1	eF. pL. iR.
427	—	19 —	f	0 14	n	0 19	1	vF. S. lE. nearly mer.
428	Sept. 10	30 —	f	14 30	f	0 19	2	vF. S. iF. lbM.
429	—	41 Ceti	p	26 42	n	0 35	1	vF. pS. E.
430	—	— —	p	26 54	n	0 44	1	vF. vS.
431	—	Neb. I. 100.	f	0 22	n	0 0	1	The 2d of two. eF. S. 5 or 6′ diſt. from I. 100.
432	—	41 Ceti	f	15 36	n	0 22	1	eF.
433	—	67 —	p	15 39	n	0 59	1	vF. vS.
434	—	— —	f	18 40	f	0 42	1	vF. cL. iF. lbM. 4 or 5′ l. 2 or 3′ b.
435	26	59 (p) Pegaſi	f	8 42	f	0 20	1	vF. vS.
436	—	32 (2d c) Piſc	f	1 20	f	1 1	1	vF. pL. lbM.
437	27	26 —	p	7 39	f	0 13	1	eF. vS. er. confirmed by 240.
438	28	93 (2 ψ) Aqua	f	9 22	f	0 15	1	eF. S. ſtellar. p. 1′½. pBſt.
439	Oct. 1	20 Ceti	p	0 42	f	1 3	2	vF. S. iE.
440	—	38 —	f	1 5	n	0 8	1	vF. vL. requires great attention.
441	—	43 —	f	5 8	f	1 29	1	vF. vS. iE.
442	—	— —	f	5 23	f	1 26	1	vF. vS. iE.
443	5	17 Eridani	p	17 51	f	0 13	1	vF. vS. confirmed by 240.
444	—	— —	p	9 23	n	0 25	1	eF. vS.
445	—	— —	p	5 37	f	0 41	1	vF. pS. E.
446	—	— —	f	3 4	f	0 3	1	vF. S. between ſome Sſt.
447	—	20 (τ) Orion	f	10 23	n	1 32	2	vF. cL. iR. near a hook of vSſt.
448	—	— — —	f	34 45	f	0 26	3	vF. S. R. r. lbM.
449	6	1 (1ſt τ) Erid	f	4 8	n	1 34	1	vF. pL. broadly E. lbM.
450	—	— — —	f	6 30	n	1 56	2	vF. S. lE.

III.	1785	Stars.		M.	S.		D.M.		Ob	Deſcription.
451	Oct. 6	20 Eridani	f	2	30	ſ	0	59	1	vF. S. R.
452	8	52 (π) Aqua	p	30	46	n	1	39	1	vF. pL. R. r.
453	—	10 Orionis	f	5	7	ſ	0	4	1	vF. vS. confirmed 240.
454	9	60 Ceti	p	27	18	n	0	27	1	eF. pL. 240. left doubtful.
455	—	82 (δ) ———	f	4	11	n	1	2	2	vF. vL. lbM. er. 6 or 7′ dia.
456	25	28 (ω) Piſcium	f	13	6	ſ	0	28	1	vF. pS. iF.
457	—	78 (ν) Ceti	p	20	29	n	0	20	1	vF. cL. vlbM. m. p. Bſt. and joining.
458	26	49 Aquarii	p	2	52	n	0	6	1	vF. S. er. time inaccurate.
459	—	56 (1ſt υ) Ceti	p	7	44	ſ	1	17	1	vF. vS. er.
460	—	———	p	2	55	ſ	1	16	1	vF. vS.
461	27	18 (ε) Piſ. Au.	f	90	20	n	1	56	1	vF. cL. lE. glbM. 4 or 5′ l.
462	Nov. 7	82 (δ) Ceti	f	8	1	ſ	0	36	1	vF. S.
463	22	25 ———	p	12	56	ſ	0	23	2	vF. pL. iR. r.
464	—	67 ———	p	20	11	n	0	59	1	eF. S. found in gaging.
465	23	46 (ξ) Pegaſi	f	11	21	n	0	54	1	eF. S. iF. 240 the ſame.
466	—	82 ———	f	5	54	ſ	0	15	1	vF. S. R. lbM.
467	27	18 Ceti	p	11	15	n	0	12	1	eF. vS. 240 left ſome doubt.
468	—	72 (ρ) ———	p	27	13	n	0	43	1	vF. E. nearly mer. lbM. 1′½ l. 1′b.
469	—	83 (ε) ———	f	19	27	ſ	0	30	1	vF. ſtellar. 240 left ſome doubt.
470	28	91 Aquarii	p	1	53	ſ	0	7	1	eF. vS. 240 left doubtful.
471	—	53 (χ) Ceti	p	13	54	n	0	40	1	A few Sſt. mixed with nebuloſity.
472	—	55 (1ſt ζ) ———	f	41	48	ſ	0	18	1	vF. pL. vlbM. near ſcattered ſt.
473	29	87 (μ) Pegaſi	p	44	53	ſ	1	26	1	eF. cL. ſome doubt. p. a row of ſt.
474	—	23 (2d θ) Arie	f	7	29	n	0	50	1	eF. vS. iR. confir. 240.
475	—	34 (μ) ———	p	1	44	ſ	0	44	1	vF. S. confir. 240.
476	Dec. 5	34 (ζ) Andro	p	11	14	ſ	0	23	1	vF. vS. ſtellar. ſp. pBſt.
477	—	36 ———	p	2	25	n	0	44	1	vF. S. R. juſt p. vFſt.
478	7	20 Leo. min.	f	1	20	n	0	47	1	eF. S. left doubtful.
479	26	2 (ε) Can min	f	26	18	n	0	25	1	ſuſpected. eF. vS. lE.
480	28	9 (ο) Virgin	f	12	46	ſ	2	5	1	vF. L. ſeen by looking at II. 137.
481	—	31 (1ſt *d*) ———	p	17	49	n	1	44	1	vF.
482	—	———	p	15	22	n	1	39	1	eF.
483	—	———	p	12	49	n	1	24	1	vF.
484	—	———	p	11	8	n	1	34	1	vF.
485	30	46 Ceti	p	40	9	ſ	1	4	2	vF. S. iF. r.
486	—	76 (σ) ———	p	12	32	ſ	0	52	1	vF. vS. iF. better with 240.
487	—	20 Eridani	p	3	52	n	2	14	1	vF. S. E.
488	31	9 Hydræ	f	38	13	ſ	0	26	1	vF. cL. gvlbM. 3′ l. 2′ b. p. pBſt.
489	—	53 Virginis	p	18	36	ſ	0	47	1	vF. S. lbM.
	1786									
490	Jan. 1	45 Eridani	p	11	41	ſ	0	42	1	vF. vS. lE. better with 240.
491	—	13 (*n*) Virgin	p	16	10	n	0	35	2	vF. S. R. bM.
492	—	5 (η) ———	f	7	0	ſ	0	15	2	vF. cL. mE. r.
493	—	9 (γ) ———	p	6	35	n	1	12	2	eF. S. iF.
494	—	———	f	1	24	n	0	48	2	vF. pS. E.

III.	1786		Stars.		M.	S.		D.	M.	Ob	Deſcription.
495	Jan.	2	61 Urſæ	f	58	0	ſ	0	46	1	eF. S. iF. r.
496		—	— —	f	70	52	ſ	0	3	1	eF. vS. pmE.
497		27	36 Sextantis	f	6	47	n	1	20	2	cF. S. R. vlbM.
498		—	58 (*d*) Leonis	f	0	43	n	0	1	1	vF. mE.
499		30	39 (A) Erida	p	6	26	n	1	25	1	vF. S. E. er.
500		—	69 (λ) —	p	3	50	ſ	0	24	1	cF. S. iF. bM.
501	Feb.	1	57 (μ) —	f	4	13	n	0	30	1	vF. vS.
502		—	— — —	f	6	2	n	0	39	1	vF. S.
503		—	— — —	f	14	49	ſ	0	1	1	vF. pL. ſp. 2pBſt. equil. triang.
504		2	60 (σ) Virg	p	38	27	n	0	34	2	vF. pS.
505		—	64 —	f	16	1	ſ	0	39	2	vF. vS. R.
506		—	— —	f	32	47	n	0	7	1	vF. E. 2′ l.
507		4	82 —	p	9	23	ſ	0	4	1	vF. vS. er. 240 rather confir.
508		—	19 Libræ	p	18	52	ſ	0	27	1	vF. cL. iE. nearly mer.
509		22	5 (β) Virgin	f	49	54	ſ	0	35	1	vF. vS.
510		24	55 Orionis	f	1	13	n	0	7	1	eF. E. er. probably a patch of ſt.
511		—	110 Virginis	f	3	5	ſ	0	25	1	vF. R. precedes I. 128. 7′½. and is 5′ n
512	March	3	17 (β) Cancri	p	14	9	n	0	9	1	vF. S. R. mbM. 240 ditto.
513		—	6 (*b*) Leonis	f	2	1	n	0	25	1	eF. vS. ſtellar. 240 verif.
514		—	26 (χ) Virgin	f	10	4	ſ	1	8	2	eF. S. mE.
515		—	— — —	f	12	19	ſ	0	26	1	vF. S. E.
516		—	— — —	f	14	18	ſ	0	41	1	vF. S.
517		—	— — —	f	14	43	ſ	0	48	1	vF. S.
518		19	41 (λ) Hydræ	p	0	28	ſ	0	5	1	vF. S. R. in the field with λ
519		24	1 Sextantis	f	1	47	n	0	7	1	vF. pL. vgvlbM. betw. 2 groups of ſt. np. ſf.
520		25	27 Hydræ	f	3	9	ſ	0	51	1	vF. S. E.
521		—	— —	f	22	39	ſ	0	45	1	cF. pS. lE.
522		—	14 (ε) Crater	p	34	1	ſ	2	2	2	cF. pL. iR. lb. near M.
523		—	21 (*q*) Virgin	f	13	23	ſ	0	38	1	vF. E. ſp nf. 4′ l. 3′ b.
524		—	— — —	f	15	14	ſ	1	59	2	cF. mE. r. 4′ l. ¾′ b.
525		—	49 (*g*) —	p	14	19	n	1	14	1	vF. vS.
526		—	— — —	p	13	15	n	0	8	1	eF. eS. ſome little doubt.
527		27	8 Sextantis	p	10	33	ſ	0	31	3	vF. S. iR. vgbM.
528		—	— —	p	9	10	ſ	1	32	1	vF. S. E. nearly mer.
529		—	16 (κ) Crater	p	13	0	ſ	1	46	1	eF. S.
530		—	— — —	p	3	32	ſ	1	30	1	vF. ſtellar.
531		—	— — —	p	2	47	ſ	1	32	1	cF. ſtellar. vlbM.
532		—	— — —	f	1	7	ſ	0	51	1	vF. lE. vlb. about M.
533		—	24 (ι) —	f	28	31	ſ	0	59	1	vF. S. iF. time a little inacc.
534		—	— — —	f	33	51	ſ	0	48	1	vF. pL. of uneq. light.
535		—	— — —	f	40	50	n	0	58	2	vF. pS. iF.
536		—	68 (ι) Virgin	p	36	17	ſ	0	33	1	cF. ſtellar.
537		—	— — —	p	34	23	ſ	0	39	1	vF. vS. iF.
538		—	— — —	p	31	24	n	0	8	2	eF. S. er.

III.	1786	Stars.		M. S.		D.M.	Ob	Deſcription.
539	Mar. 27	68 (ι) Virgin	p	5 57	f	1 21	1	vF. vS.
540	28	19 Urſæ	p	15 27	n	1 3	2	vF. S. E. 20° np ſf. contains 2vFſt.
541	—	8 Leo. min.	f	9 41	n	0 50	3	cF. S. iR. gbM. r. 1′½ dia.
542	—	21 — —	p	7 55	n	0 8	3	cF. vL. iF. 5′ l. 4′ b. ſp. a double ſt.
543	April 17	11 (ſ) Virgin	f	37 39	f	1 31	1	eF. pL.
544	—	— — —	f	43 12	f	1 23	1	vF. vS.
545	—	— — —	f	62 44	f	1 9	1	eF. cS. er.
546 547	29	64 —	f	36 17	n	1 4	1	Two. Both vF. vS. r. the place betw. them. ſp nf. but near. mer.
548	30	43 (δ) —	p	0 31	f	0 30	1	vF. cS. with 240 lE. near vSſt.
549	—	84 (ο) —	f	9 1	f	1 13	1	eF. vS. ſtellar. confir. 240.
550	—	109 —	p	5 32	n	1 35	1	vF. S. p. and in a line with 2Bſt.
551 552	May 1	31 Bootis	p	23 9	f	0 42	1	Two. Both eF. vS. The place is that of the f. diſt. 3 or 4′
553	3	50 (σ) Serpen	p	12 7	f	0 15	1	cF. iF, r. 5′ l. 3′ b.
554	27	3 —	p	21 20	f	1 19	1	vF. S. E. np ſf. but nearly mer.
555	June 22	101 Hercul	p	2 55	f	1 28	1	cF. S. lE. iF. r.
556	Sept. 4	71 (ε) Piſcium	f	22 10	n	1 24	1	vF. mE. 75° ſp nf. 1′½ l.
557	18	85 Ceti	p	6 18	n	0 52	1	vF. vS. lE. r. 240 the ſame.
558	20	97 Aquarii	p	14 9	f	0 33	1	eF. cL. iR. 5 or 6′ dia.
559	—	54 Eridani	p	65 18	f	0 59	1	3vSſt. in a line with vF. nebuloſity.
560	21	45 Androm	f	16 14	f	0 32	1	vF. S. E. among ſt.
561	—	58 —	p	17 32	f	1 34	1	vF. ſtellar.
562 563 564 565	—	— —	p	15 22	f	1 48	1	Four. ſtellar. unequal. Three in a row, and the fourth making a a rectangle with them. That at the angle is much larger.
566	—	— —	p	5 4	n	0 14	2	vF. pL. iR.
567	—	— —	f	2 29	f	0 12	1	vF. S. lE.
568	30	17 Eridani	p	8 17	n	2 17	1	eF. S. iF. among 3 or 4 ſt.
569	—	— —	f	9 13	n	0 27	1	eF. lE. er.
570	Oct. 17	26 (β) Perſei	p	43 39	n	0 51	1	eF. vS. lE.
571	—	— — —	p	42 9	n	0 44	1	eF. ſtellar. not verified.
572 573	—	— — —	p	32 26	f	0 11	1	Two. Both vF. vS. er. diſt. 4′. the place between them.
574 575	—	— — —	f	13 6	n	0 27	1	Two. Both vF. ſtellar. vlbM. but the f. is the brighteſt and largeſt.
576	18	12 Androm	p	24 27	f	1 47	1	vF. S. iR. ſtellar.
577	—	53 (τ) —	p	18 55	f	0 8	1	vF. pL. lE. lbM.
578	—	28 (ω) Perſei	p	2 50	f	1 16	1	vF. vS.
579	24	17 (ι) Andro	p	3 21	n	1 3	1	vF. vS. juſt f. pBſt.
580	—	30 Perſei	p	20 43	f	1 3	1	ſuſpected. r. ſome ſt. viſible.
581	25	40 Arietis	p	8 24	f	0 18	1	vF. E. iF. time inaccurate.
582	—	— —	p	1 17	f	2 7	1	vF. S. iF.
583	26	10 (α) Triang	p	18 21	f	0 29	1	vF. vS. E. or 3Fſt. with vF. Nebul.

III.	1786	Stars.		M.	S.		D.	M.	Ob	Deſcription.
584	Oct. 26	35 Arietis	p	0	41	n	0	50	1	vF. S. bM.
585	Nov. 26	48 (ν) Eridani	p	3	33	ſ	1	2	1	ſuſpected; hazy weather.
586	—	— — —	p	3	6	ſ	0	56	2	eF. S. E. nearly par. another ſuſpec. 3′ ff. ſtellar.
587	28	42 (ξ) —	f	2	34	n	0	9	1	vF. S. bM. betw. 2 ſt.
588	—	— — —	f	7	35	ſ	1	57	1	vF. S.
589	—	— — —	f	10	16	ſ	1	22	1	vF. cL. iE. nearly par. bM.
590	Dec. 14	8 Leporis	f	9	18	ſ	0	6	1	eF. ſtellar. a little doubtful.
591	15	13 (ζ) Eridani	p	4	35	ſ	0	6	1	eF. ſtellar. about 1′ nf. II. 286.
592	20	Neb. II. 447.	p	0	6	ſ	0	2	1	Two. The p. vF. vS. The next eF. eS. and left doubtful.
593				0	0		0	5		
594	—	26 Ceti	f	18	21	ſ	0	23	1	vF. mE. bM. 3′½ l. 1′½ b.
595	21	29 —	p	28	42	n	1	17	1	vF. S. ſome ſt. in it.
596	—	44 Hydræ	p	34	21	n	0	50	2	vF. S. lbM. ff. a trapezium of S. ſt.
597	24	— —	p	59	13	n	2	44	1	vF. S. R. vglbM.
598	30	59 (c) Leonis	f	2	40	ſ	1	19	1	eF. S. lE. not verified.
	1787									
599	Jan. 11	55 (δ) Gemini	f	68	4	ſ	0	12	1	eF. pL. r.
600	14	30 (η) Leonis	p	11	47	ſ	0	20	1	vF. S. iR.
601	—	— — —	p	11	4	n	0	3	1	vF. cS. lE. er.
602	—	29 Comæ	p	12	7	n	0	6	1	vF. cL. vgbM. f. cBſt.
603	—	— —	p	6	16	n	0	11	1	vF. E. np ſf. 2′½ l.
604	17	58 Androm	f	2	45	ſ	0	21	1	vF. ſtellar. confir. 240.
605	Feb. 10	9 (1ſt μ) Canc	p	3	15	n	0	46	1	vF. S. iF.
606	13	10 (2d μ) —	f	11	31	ſ	1	1	2	vF. S. ſtellar.
607	—	33 (η) —	p	12	33	n	0	38	1	vF. vS.
608	22	69 (ν) —	f	2	5	n	0	33	1	eF. S. R. vlbM.
609	—	21 (θ) Crater	f	2	28	n	0	28	1	vF. vS. R. with 240 gbM.
610	—	65 Virginis	p	33	51	ſ	0	12	1	cF. pL. E.
611	—	— —	p	32	29	n	0	50	1	vF. S. no time to verify.
612	March 11	87 (e) Leonis	f	23	23	ſ	0	57	1	vF. cS. E.
613	—	44 (k) Virgin	p	1	42	n	0	8	1	vF. E. er.
614	—	— — —	f	0	57	ſ	0	49	1	cF. S iR.
615	17	38 Leo. min.	p	1	27	ſ	0	27	2	cF. S. er.
616	—	6 Canum	p	34	40	ſ	1	1	2	vF. cL. iF. 4′ dia. 5′ f. ſt. 6 m.
617	—	— —	p	27	3	ſ	1	13	2	eF. pL. iR. 1′ dia. or more.
618	—	12 —	p	3	8	ſ	1	31	1	eF. vS.
619	—	17 —	f	11	29	n	0	2	1	vF. S. E. nearly mer.
620	—	— —	f	26	36	ſ	0	14	1	cF. E. nearly par. r. ¾′ l.
621	—	— —	f	38	29	ſ	0	46	1	vF. S. iR. conf. 300.
622	—	12 (λ) Coronæ	f	7	17	ſ	0	37	1	vF. S. R. diſcov. in gaging.
623	—	— — —	f	24	7	ſ	0	19	1	vF. vS. n. 2 ſt. 300 confir.
624	—	— — —	f	27	24	ſ	0	9	1	vF. S. bM. diſcov. with 300.
625	18	10 (n) Urſæ	p	2	41	ſ	2	27	1	vF vS. 300.
626	—	— — —	f	7	14	ſ	0	4	2	vF. S. iF. lbM. r.

627

III.	1787	Stars.		M.	S.		D.	M.	Ob	Deſcription.
627	March 18	43 Lyncis	p	17	50	f	1	2	2	vF. vS. ſtellar. 300.
628	—	— ——	p	16	48	f	0	9	1	cF. cS.
629 630	—	— ——	p	15	24	f	0	8	1	Two. Both vF. vS. diſt. 3′. nearly mer. 300.
631	—	34 (μ) Urſæ	f	3	39	f	1	55	2	vF. S. R. 300.
632	—	47 ——	p	2	8	n	0	32	2	cF. vS. lE. mer. gmbM.
633	—	20 Canum	f	1	58	f	0	13	1	vF. S. lbM.
634	—	54 (φ) Bootis	p	1	24	f	0	36	1	vF. vS. conf. 300 ſp. 2 vBſt.
635 636	—	— — ——	f	6	42	n	0	46	1	Two. The nf. vF. vS. verif.300. The ſp.diſcov.with 300 eF.S.iF.
637	—	30 (g) Hercul	p	24	18	f	1	5	1	vF.eS.300.ſhewed2vSſt.with nebu.
638	—	— — ——	p	3	33	f	0	59	1	vF. vS.
639	—	— — ——	p	2	53	f	1	24	1	eF. eS.
640	—	— — ——	f	0	54	f	1	5	1	vF. vS.
641	—	— — ——	f	1	10	f	1	16	1	vF. vS.
642	19	70 Virginis	f	1	37	f	0	26	1	vF. S. iF. time l. inaccurate.
643	—	— ——	f	3	43	n	0	5	1	vF. S. lE. juſt ſf. ſt.
644	—	5 (υ) Bootis	f	25	41	f	0	44	1	vF. vS. E. confir. 300.
645	—	30 (ζ) ——	p	10	16	n	0	17	1	eF. vS. lbM. betw. 2 vFſt. 300.
646	—	28 (β) Serpen	f	11	15	n	0	24	1	vF. S. lE.
647	20	44 Lyncis	p	33	11	f	2	16	1	vF. vS. verif. 300.
648	—	13 Canum	p	36	41	n	0	46	1	vF. E. par. 1′ l.
649	—	— ——	f	12	29	n	1	0	1	vF. S. lE.
650	—	— ——	f	19	54	n	2	18	1	eF. vS.
651	—	— ——	f	27	11	n	1	11	1	vF. S.
652	—	— ——	f	29	47	n	0	17	1	eF. vS.
653	—	— ——	f	62	59	n	1	34	1	vF. pS. E. mer. 300.
654	April 9	19 ——	p	7	36	n	0	51	1	vF. vS. lbM.
655	—	— ——	p	*	26	n	2	57	1	vF.pS.lbM.*forgot,butis5,6,or7′.
656	—	20 ——	f	15	21	n	1	15	1	vF. vS. lbM.
657 658	—	— ——	f	83	33	n	1	57	1	Two. Both vF.vS.E.in differ.di- rections.2 or3′diſt.par.each f.Sſt.
659	—	— ——	f	117	16	n	0	18	1	vF. vS. r.
660	—	— ——	f	119	18	n	1	16	1	eF. cS.
661	—	— ——	f	125	25	n	0	44	1	eF. S.
662	11	29 (γ) Virgin	f	2	8	n	0	54	1	vF. pL.
663	—	— — ——	f	3	33	n	0	55	1	vF. S. iF.
664	—	— — ——	f	6	6	f	0	14	1	vF. S.
665	15	90 (p) ——	p	1	48	n	0	23	2	cF. cL. R. vlbM. r. 5′ dia.
666	—	102 (1ſt υ) —	p	19	18	f	0	55	1	eF. vS.
667	—	— — ——	p	18	53	f	0	33	2	eF. vS. verif. 300. 2d obſ. vF. S.
668	—	105 (φ) ——	p	3	29	f	0	58	1	cF. S. r.
669	May 7	61 ——	p	5	42	n	1	30	1	vF.
670	—	— ——	p	2	45	n	1	46	1	vF.
671	—	8 Libræ	p	9	38	f	1	28	1	cF. S. R. ſp and joining 2Sſt.

672

III.	1787	Stars.		M.	S.		D.M.		Ob	Deſcription.
672	May 12	19 (λ) Bootis	p	48	58	n	0	41	3	cF. vS. ſtellar. 300.
673	—	— — —	p	38	30	n	2	21	1	cF. S. R. or lE.
674	—	— — —	p	5	52	n	2	31	1	cF. cS. iR.
675	—	38 (2d *h*) —	p	11	18	n	0	35	1	vF. pS. iF. ſp. 2 S. unequal ſt.
676	15	24 (*g*) —	p	16	34	n	0	35	2	cF. cS. lE nearly par.
677	—	— — —	p	2	56	ſ	1	15	1	vF. pS. lE.
678	—	* A Bootis 7m	f	0	3	n	0	3	1	Two. The p. vF. vS. The f.
679				0	48		0	1		eF. eS. * See note.
680	—	42 Herculis	p	13	17	n	1	0	2	vF. S. R. lbM. er. near ſome Sſt.
681	16	* C Can^{m} 6m.	f	0	44	ſ	0	15	1	cF. vS. lE. * See note.
682	—	— — —	f	7	35	ſ	0	7	1	eF. cS. E. ſp. Sſt.
683	—	— — —	f	12	35	ſ	0	25	1	cF. pL. iF.
684	—	— — —	f	13	49	n	0	34	1	vF. vS. R.
685	—	27 (γ) Bootis	p	19	48	n	1	6	2	vF. cS. R. ſbM.
686	—	— — —	f	8	42	n	0	18	1	eF. cS. lbM.
687	—	— — —	f	13	27	n	0	23	1	cF. pS. another ſuſpec. 2′ n. 300.
688	—	16 (τ) Coronæ	f	7	34	ſ	0	48	1	vF. cS. iR.
689	—	67 (π) Hercu	p	20	32	ſ	0	11	1	eF. cL. iE. nearly par.
690	19	10 Libræ	p	4	6	ſ	0	43	1	vF. cS. iF. lbM.
691	—	— —	f	6	51	ſ	0	59	1	cF. ſmbM. ſtellar.
692	Aug. 12	33 (ι) Aquarii	p	5	23	n	0	38	1	eF. E. np ſf. 2′ l. 1′ b.
693	Sept. 11	41 —	p	11	30	n	0	36	1	eF. vS. 360 confirmed it.
694	Oct. 11	50 (*f*) Caſſio	f	90	22	n	0	30	1	vF. vS. iR. bM.
695	Nov. 3	10 Camelop	p	155	0	n	0	53	1	eF. pL. iF.
696	5	17 (ξ) Cephei	p	16	35	ſ	0	47	2	vF. S. R. lbM. r. 1′ dia.
	1788									
697	Jan. 14	67 Urſæ	f	11	9	n	0	40	3	vF. E. np ſf. 5′ l. 1′ b.
698	—	27 (γ) Bootis	p	39	53	n	1	29	2	vF. S.
699	—	— — —	p	38	20	n	2	8	2	vF. S. iF.
700	Feb. 3	45 (ω) Urſæ	p	14	53	ſ	1	33	1	cF. L. iE. mb. f. M. 4′ l. 2′½ b.
701	—	— — —	p	6	6	ſ	0	1	1	vF. vS. iF.
702	—	13 Canum	p	42	13	ſ	0	55	1	vF. vS.
703	5	71 (ο) Gemin.	p	10	3	ſ	0	46	1	vF. vS. perhaps a patch of ſt.
704	—	60 Urſæ	p	81	11	ſ	0	22	1	eF. vS. perhaps a patch of Sſt.
705	—	— —	p	39	57	ſ	0	43	1	vF.
706	—	— —	p	23	49	n	0	38	2	vF. vS. lE. f. cBſt.
707	—	63 (χ) —	f	11	2	n	0	34	2	vF. vS. another ſuſp. ſf. eF. eS.
708	6	59 —	f	30	14	ſ	0	31	1	vF. vS. in a line with 2 ſt. nf ſp.
709	March 9	21 Lyncis	f	34	50	n	1	41	1	vF. R. vgbM: 2′½ dia.
710	—	9 (ι) Urſæ	p	45	51	n	0	49	1	vF. iF. 2′½ l. 1′¾ b.
711	—	— — —	p	41	10	n	1	49	1	eF. E. ſp nf. 3′½ l. 2′½ b.
712	—	— — —	p	4	49	n	1	6	1	eF. cS. r. p. ſome Fſt.
713	—	— — —	f	25	7	n	1	15	1	cF. cS. lE.
714	—	— — —	f	24	58	n	1	11	1	cF. cS. lE.
715	—	63 (χ) —	f	3	26	n	0	39	1	eF. pS.

III.	1787		Stars.		M.	S.		D.	M.	Ob	Deſcription.
716	March	9	63 (χ) Urſæ	f	5	2	n	2	26	1	vF. vS.
717		—	3 Canum	p	14	1	n	0	37	1	cF. mE. nearly mer. 5′ l.
718		—	— ——	p	4	6	f	0	51	1	vF. vS.
719 720		—	— ——	p	2	47	f	1	31	1	Two. Both vF. vS. diſt. 1′ in the ſame meridian.
721		—	— ——	f	32	1	f	1	21	1	vF. S.
722		11	49 (g) Virgin	p	18	9	f	0	21	1	eF. S.
723	April	1	Neb. II. 728.	p	0	25	f	0	2	1	eF. vS.
724		8	61 Virginis	f	1	43	f	2	23	1	cF. vS. iF.
725		10	60 Urſæ	f	39	40	f	1	14	2	eF. cL. iR. lbM. 3′ dia.
726		—	— ——	f	42	45	f	0	34	2	vF. pS. R.
727		12	35 (σ) Hercul	f	16	11	n	0	14	1	cF. S. E. par.
728		13	42 ——	f	20	46	n	0	54	1	vF. cS. iR.
729		27	19 (λ) Bootis	p	113	28	f	0	3	1	vF. S.
730		28	27 (β) Hercul	f	4	6	n	0	2	1	eF. vS. E.
731		29	27 (γ) Bootis	p	15	47	n	1	16	1	vF. vS.
732		—	— — ——	p	15	33	n	1	22	1	vF. vS. lE.
733		—	— — ——	p	9	25	n	2	4	1	vF. vS.
734		—	— — ——	p	8	52	n	2	8	1	cF. pS.
735		—	22 (τ) Hercul	f	30	17	f	1	2	1	eF. pS. with 300 iF.
736		30	21 (1ſt ν) Libr	f	7	7	n	1	59	1	vF. pL. E. mer. lbM. 300.
737	May	1	23 (θ) Bootis	f	49	59	f	1	46	1	vF. vS. ſtellar.
738		25	12 (ι) Draco	f	17	8	n	0	44	1	vF. vS.
739	June	2	14 (η) ——	p	32	30	n	0	57	1	vF. R. vgbM. er. 3′ dia.
740		3	15 (A) ——	p	10	14	f	3	21	1	cF. pL. iE.
741		6	31 (1ſt Ψ) ——	p	5	13	f	0	5	1	eF. ſtellar. with 300 lE. par.
742	July	8	*B Draco 7m.	f	4	25	f	0	27	1	vF. ſtellar. verif. 300. * See note.
743		30	19 Aquilæ	f	9	24	n	0	26	1	cF. iR. r. 3 or 4′ dia.
744	Aug.	2	51 ——	p	8	8	n	0	29	1	vF. pL. R. vgmbM.
745	Nov.	1	27 (δ) Cephei	f	26	10	f	1	24	1	vF. pL. iF. er.
746		—	36 Camelop.	f	64	5	f	0	38	1	vF. S. R. lbM.
747	Dec.	3	*22 Cam Hev	p	37	1	f	0	8	1	cF. pL. iF. mbM. er. ſome ſt. viſible. * See note.

Fourth claſs. Planetary nebulæ.

Stars with burs, with milky chevelure, with ſhort rays, remarkable ſhapes, &c.

IV.	1785		Stars.		M.	S.		D.	M.	Ob	Deſcription.
30	May	1	14 Canum	p	6	48		0	55	2	Two ſt. diſt. 3′ connected with a vF. narrow nebuloſity.
31	Oct.	3	50 Aquarii	f	7	55		0	37	1	F. S. ſtellar. with pL. chev.
32		5	62 (b) Eridani	f	0	35	n	0	21	2	vB. vS. mbM. like a ſt. affected with irregular burs.
33		—	49 (d) Orion	p	2	33	n	0	28	4	A ſt. with m. chev. or vBN. with m. nebuloſity.

IV.	1785	Stars.		M.	S.		D.	M.	Ob	Deſcription.
34	Dec. 28	40(2dφ) Orio	f	5	41	f	0	12	2	cB. S. nearly R. like a ſt. with L. dia. with 240 like an ill defined planetary neb.
35	31	9 Hydræ	p	8	19	f	0	14	1	A S ſt. with a bruſh ſp. FS. it reſembles fig. 7. Phil. Tranſ. Vol. LXXIV. Tab 17.
36	1786 Jan. 1	60 Orionis	p	11	38	f	0	20	3	A ſt. affected with vF. extenſive m. chev. The ſt. not quite central.
37	Feb. 15	28 (ω) Draco	f	20	33	f	2	12	1	A planetary neb. vB. has a diſk of about 35″ dia. but very ill defined edge. With long attention a vB. well defined R. center becomes viſible.
38	24	55 Orionis	f	18	3	n	1	17	2	A cſt. affected with vF. m. chev.
39	March 19	2 Navis	p	3	32	f	0	5	1	pB. R. r. within the 46th of the *Connoiſſ. des Temps* almoſt of an equal light throughout 2′ dia. no connection with the cluſter, which is free from nebuloſity.
40	27	68 (ι) Virgin	p	30	45	f	0	18	1	A pBſt. with a ſeeming bruſh to it np. may be a vS neb. cloſe to it.
41	May 26	14 Sagittarii	p	11	58	f	1	15	1	A double ſt. with extenſive nebuloſity of different intenſity. About the double ſt. is a black opening reſembling the neb. in Orion in miniature.
42	Sept. 30	51 Ceti	f	7	26	n	0	27	1	A ſt. about 8 or 9 m. with vF. bran. mer. each branch 1′ l.
43	Oct. 17	26 (β) Perſei	p	2	48	n	1	54	2	A pBſt. with 2 F. branches.
44	Nov. 28	5 Monocero	p	7	16	f	0	2	1	A ſt. involved in m. chev.
45	1787 Jan. 17	55 (δ) Gemin	f	9	6	f	1	1	2	A ſt. 9 m. with a pB. m. nebuloſity. equally diſperſed all around. A very remarkable phænomenon.
46	Feb. 22	99 (ι) Virgin	p	4	38	n	0	57	1	pB. almoſt cB. vS. ſtellar. like a ſtar with burs.
47	March 11	44 (k) ——	f	1	48	f	0	46	1	pB. ſtellar. reſembles a ſt. with a bur all around.
48	18	19 Leo. min	f	6	32	f	0	17	1	A vFſt affected with vF. nebuloſity. E. ſp nf. 1′ l. 300.
49	April 15	102(1ſtυ) Vir	p	6	9	f	0	52	2	pB. ſtellar. like a ſt. with a S. bur all around.
50	May 12	77 (κ) Hercul	p	40	13	f	0	28	1	vB. R. 4′ dia. almoſt equally B. with a F. r. margin.

IV.	1787	Stars.		M.	S.		D.M.		Ob	Deſcription.
51	Aug. 8	61 (*g*) Sagitt	p	13	56	n	1	23	2	A cB. S. beautiful planetary nebula; but c. hazy on the edges, of a uniform light; 10 or 15″ dia. perfectly R. I ſhewed it to M. De la Lande.
52	Nov. 3	4 (*d*) Caſſio	p	4	0	f	1	6	2	A ſt. 9 m. with vF. nebuloſity of S. extent about it.
53	—	10 Camelop	p	55	42	n	0	11	2	A pB. planetary nebula. near 1′ dia. R. of uniform light and pretty well defined. 2 obſ. with 360 magnified in proportion; but ſtill pretty abruptly defined, and a little elliptical.
54	1788 Jan. 14	67 Urſæ	f	7	32	f	0	30	1	cB. S. N. with F. chev.
55	Feb. 6	34 Lyncis	p	28	4	n	0	2	2	pB. R. almoſt of an even light throughout, approaching to planetary, but ill defined and a little fainter on the edges ¾ or 1′ dia. p. 1′ pc ſt.
56	—	59 Urſæ	f	25	11	n	0	56	1	cB. iR. cBNM. with extenſive chev. 5′ dia.
57	June 11	35 (σ) Hercul	f	34	27	f	0	18	2	A vS. F. ſt involved in eF. nebuloſity.
58	Nov. 25	24 Cephei	f	116	28	n	0	2	1	A ſt. 9 m. ſurrounded with vF. m. nebuloſity. The ſt. is either double, or not R. Leſs than 1′ dia.

Fifth claſs. Very large nebulæ.

V.	1785	Stars.		M.	S.		D.M.		Ob	Deſcription.
25	Nov. 27	18 Ceti	f	1	30	n	1	2	1	Four or five pL. ſt. forming a trapezium of about 5′ dia. The incloſed ſpace is filled up with faintly terminated m. nebuloſity. The ſt. ſeem to have no connexion with the nebuloſity.
26	Dec. 7	18 Leo. min.	p	8	7	n	1	1	2	cB. mE. par. 8′ l. 3′ b.
27	26	15 Monocero	p	0	12	f	0	6	2	Some pBſt. 7 or 8′ ſp. 15th Monoce. are involved in eF. m. nebuloſity which loſes itſelf imperceptibly.
28	1786 Jan. 1	48 (σ) Orion	f	2	46	n	0	44	2	Remarkable m. nebuloſity, divided in 3 or 4 large patches, including a dark ſpace; cannot

V.	1786	Stars.		M.	S.		D.	M.	Ob	Deſcription.
										take up leſs than ½ degree, but I ſuppoſe it to be much more extenſive.
29	2	61 Urſæ	f	45	38	f	0	40	1	eF. vL. vlbM. r. 10′ l. 8 or 9′ b.
30	18	42 45 } *c* Orioni	p	0	0	n	0	0	2	The 1ſt and 2d *c* Orionis, and the ſtars about them, are involved in eF. unequally B. m. nebuloſity.
31	31	44 (ι) ——	p	0	0	n	0	0	2	ι Orionis with its neighbouring ſt. are involved in eF. m. nebuloſity to a great extent.
32	Feb. 1	28 (η) ——	p	17	26	f	1	4	2	cB. vL. m. diffuſed and vaniſhing. near and ſf. Bſt.
33	——	—— —— ——	f	1	26	f	0	7	1	Diffuſed eF. m. nebuloſity. The means of verifying this phænomenon are difficult.
34	——	46(ε) Orionis	p	0	0	n	0	0	1	I am pretty certain ε Orionis is involved in unequally diffuſed m. nebuloſity.
35	——	36 (υ) —— 56 ——	f p	3 2	39 16	f n	0 0	40 28	4	Diffuſed m. nebuloſity, extending over no leſs than 10 degrees of PD. and many degrees of RA. It is of very different brightneſs, and in general extremely F. and difficult to be perceived. Moſt probably the nebuloſities of the 28th, 30, 31, 33, 34, and 38th of this claſs are connected together, and form an immenſe ſtratum of far diſtant ſtars, to which muſt alſo belong the nebula in Orion.
36	Oct. 17	35 (ν) Andro	p	9	8	f	0	20	2	vF. vL. E. nearly mer. or a little from np ſf. about 20′ l.
37	24	57 Cygni	f	5	1	f	1	1	1	vL. diffuſed nebuloſity. bM. 7 or 8′ l. 6′ b. and loſing itſelf vg. and imperceptibly.
38	Dec. 20	19 (β) Orion	f	11 11	9 35	n f	1 0	19 52	1	Strongly ſuſpected nebuloſity of v. great extent. Not leſs than 2° 11′ of PD. and 26″ of RA. in time.
39	21	11 (β) Crater	p	8	15	f	0	17	2	vF. mE. nearly par. or about 10° ſp nf. vgbM. 8′ l. 3′ b.

V.	1786	Stars.		M.	S.		D.	M.	Ob	Deſcription.
40	Dec. 21	11 (β) Crater	p	7	49	f	0	26	2	vF. mE. 15° ſp nf. vlbM. about 7′l. 4′b.
41	1787 March 17	6 Canum	p	8	27	f	1	12	1	vB. E. 60° ſp nf. 20′l. 2′b.
42	20	13 ——	p	18	39	n	1	48	1	vB. mE. ſp nf. but nearly par. mbM. 16′l.
43	1788 March 9	3 ——	p	0	38	f	1	41	3	v brilliant. BN. with Fm. bran. np ſf. 15′l. and to the ſf. running into vF. nebuloſity extending a great way. the N. is not R.
44	Nov. 1	36 Camelop	f	84	33	n	0	23	2	cB. R. vgbM. BN. 6 or 7′ dia. with a F. branch extending a great way to the np. ſide; not leſs than ½ degree. and to the n. or nf. the nebuloſity diffuſed over a ſpace not leſs than a whole degree.

Sixth claſs. Very compreſſed and rich cluſters of ſtars.

Additional abbreviations.	Cl. Cluſter.	com. compreſſed.
	ſc. ſcattered.	co. coarſely.

VI	1785	Stars.		M.	S.		D.	M.	Ob	Deſcription.
20	Oct. 27	18 (ε) Piſ. Auſt	f	133	24	n	0	23	2	cB. iR. 8 or 9′ dia. a great many of the ſt. viſible, ſo that there can remain no doubt but that it is a Cl. of vS. ſtars.
21	Dec. 7	25 Gemino	f	2	15	f	1	15	1	A v. rich and v. com. Cl. ſt. of about 5′ dia. ſome of the largeſt ſt. are in a row.
22	1786 Feb. 1	31 Monocero	p	30	4	n	1	20	4	A beautiful Cl. of much com. ſt. conſid. rich. 10 or 12′ dia. C. H. diſcovered it in 1783.
23	June 27	46 (υ) Sagitt	p	49	15	f	0	42	1	A beautiful Cl. of vS. ſt. of various ſizes. 15′ dia. very rich.
24	Oct. 17	58 (ν) Cygni	f	15	56	n	1	18	2	A v. com. and v. rich Cl. of eSſt. about 6′l. 4′b. nearly par.
25	Dec. 11	27 (κ) Perſei	f	5	55	n	2	25	2	A beautiful com. and rich Cl. of S. and L. ſt. 7 or 8′ dia. the L. ſt. arranged in lines like interwoven letters.

VI.	1786	Stars.		M. S.		D.M.	Ob	Deſcription.
26	Dec. 11	53 (*d*) Perſei	f	13 34	ſ	1 13	1	A vF. and v. com. Cl. of eS. ſt. near 4′ dia.
27	27	22 Monocero	p	20 9	n	0 51	1	A v. beautiful Cl. of much com. S. and L. ſt. above 20′ dia.
28	1787 Jan. 11	75(*l*) Orionis	f	21 25	n	1 2	1	A Cl. of e. com. and eS. ſt. c. rich iF. the f. and moſt com. part R.
29	Oct. 14	3 Lacertæ	p	7 52	n	2 7	1	A com. Cl. of eS. ſt.
30	18	7 (ϱ) Caſſiop	f	3 10	ſ	0 46	3	A beautiful Cl. of v. com. Sſt. v. rich. C. H. diſcovered it 1783.
31	Nov. 3	37 (δ) ——	f	19 48	n	1 2	1	A beautiful Cl. of pL. ſt. near 15′ dia. conſ. rich.
32	1788 Sept. 21	80(1ſt π) Cyg	p	11 26	n	0 28	1	A beautiful Cl. of p. com. ſt. 8 or 9′ dia. nearly R. c. rich.
33	Nov. 1	7 (χ) Perſei	f	1 7	ſ	0 22	1	A v. beautiful and brilliant Cl. of L. ſt. v. rich. the M. contains a vacancy.
34	——	—— —— ——	f	4 0	ſ	0 23	1	A v. beautiful, brilliant Cl. of L. ſt. iR. v. rich. near ½ degree in dia.
35	26	15 (κ) Caſſiop	p	1 22	ſ	1 26	1	A S. Cl. of vF. and e. com. ſt. about 1′ dia. The next ſtep to an er. neb.

Seventh claſs. Pretty much compreſſed cluſters of large or ſmall ſtars.

VII.	1785	Stars.		M. S.		D.M.	Ob	Deſcription.
18	July 17	12 Vulpeculæ	p	7 56	n	0 44	1	An E. Cl. of i. ſc. ſt. of various ſizes. c. rich.
19	30	21 Aquilæ	p	5 49	n	1 55	1	A p. com. Cl. of p. ſc. ſt. of var. ſizes, magnitudes, and colours. iF. and unequally com. 12 or 15′ dia.
20	Nov. 1	7 Monocero	f	1 3	n	0 35	3	A beautiful Cl. of p. com. and equally ſc. ſt. 10 or 12′ dia.
21	Dec. 26	109 (*n*) Tauri	p	14 59	n	1 37	1	A Cl. of p. com. ſt. with many eS. ſt. mixed with them.
22	28	13 Monocero	f	2 48	n	0 21	1	A S. Cl. of p. com. vS. ſt.
23	30	31 (η) Canis	f	32 6	ſ	0 39	1	A com. Cl. of pL. ſt. c. rich.
24	1786 Jan. 1	60 Orionis	p	5 9	ſ	0 9	2	A Cl. of p. com. pS. ſc. ſt. with many eS. ſuſpec. betw. them 7 or 8′ dia.
25	27	8 Monocero	p	11 46	n	0 49	1	A Cl. of p. com. ſt. of ſeveral ſizes 4 or 5′ dia. with extenſively ſtraggling ones.

VII.	1786	Stars.		M.	S.		D.	M.	Ob	Deſcription.
26	Jan. 30	6 Monocero	f	8	59	n	1	7	1	A Cl. of eS. and pm. com. ſt. with a few L. but not rich. in the ſhape of a hook.
27	Feb. 24	11 —	f	42	13	f	1	21	2	An i. Cl. of eS. ſt. c. com. 9 or 10′ l. 4 or 5′ b. with an extending bran. towards ſp. C. H. diſcov. 1783.
28	Mar. 19	2 Navis	p	8	23	n	0	47	1	A Cl. of pS. ſt. p. rich. 15′ dia.
29	April 30	5 (ρ) Scorpii	p	7	14	n	0	38	1	A Cl. of vS. ſt. p. rich 6′ l. 4′ b. in the form of a parallelogram.
30	May 26	14 Sagittarii	p	1	35	n	0	9	1	A Cl. of pS. ſc. ſt. above 15′ dia.
31	—	— —	f	1	29	f	0	25	1	A Cl. of vS. and p. com. ſt. c. rich. 2 or 3′ dia.
32	Sept. 21	58 Androm	p	10	49	f	0	8	4	A vL. co. ſc. Cl. of vL. ſt. iR v. rich. takes up ½ degree like a nebulous ſt. to the naked eye.
33	Oct. 18	11 (μ) Aurig	f	6	32	n	0	54	1	A Cl. of p. com. pS. Sſt. c. rich. contains 1 L. the reſt are all of a ſize.
34	Dec. 11	13 (α) —	f	9	7	n	0	32	1	A Cl. of vF. and vSſt. p. com. but not rich. iF. 3′ dia.
35	24	70 (ξ) Orionis	f	15	53	f	1	29	1	A Cl. of S. pm. com. ſt. with ſuſpected m. nebuloſity.
36	26	18 Monocero	p	3	48	n	1	0	1	A Cl. of v. ſc. ſt. c. rich. and of great extent.
37	27	77 Orionis	f	12	24	n	0	55	1	A Cl. of v. com. eSſt. c. rich. 3 or 4′ dia. moſt com. M.
38	—	22 Monocero	p	7	39	n	1	31	2	A beautiful Cl. of vSſt. of ſeveral ſizes. c. com. and rich M. 10 or 12′ dia.
	1787									
39	Jan. 17	21 (σ) Aurigæ	f	3	25	f	2	6	1	A p. com. Cl. of Sſt. 4′ dia.
40	Oct. 14	3 Lacertæ	p	38	31	n	1	35	1	A Cl. of Sſt. of ſeveral ſizes. 3 or 4′ dia. p. rich. like a forming one.
41	—	— —	f	5	8	n	0	2	2	A S Cl. of ſt. p. com. e. rich in vS. ſt. The com. part 4 or 5′ dia.
42	18	24 (η) Caſſio	f	29	41	n	0	26	2	A brilliant Cl. of L. and vS. ſt. c. rich.
43	Nov. 3	1 (ε) —	p	11	41	n	1	25	1	A S. Cl. of vSſt. c. com. and p. rich.
44	—	— — —	f	4	34	n	1	8	2	A Cl. of p. com. pLſt. c. rich. The ſt. arranged chiefly in lines from ſp. nf.
45	—	37 (δ) —	p	9	29	f	1	28	2	A S. p. com. Cl. of ſt. not rich. iF. like a forming one.
46	—	— — —	f	17	23	n	1	44	2	A S. Cl. of pL. ſt. c. rich.
47	—	10 Camelop	p	55	40	n	1	37	2	A Cl. of ſt. p. rich and c. com. lE. 3 or 4′ dia. iF.

VII.	1787	Stars.		M.	S.		D.	M.	Ob	Deſcription.
48	Nov. 9	32 Caſſiop	f	17	1	f	1	40	1	A com. Cl. of ſome pL. and many vS. ſt. iR. 6 or 7′ dia.
49	—	45 (ε) ——	p	11	8	n	0	20	1	A Cl. of ſome cL. ſt. and many eS. ſo as hardly to be ſeen. The Lſt. arranged in circular order 3 or 4′ dia.
50	1788 Sept. 27	81 (2d π) Cyg	p	22	13	f	1	14	1	A few Sſt. with ſuſpected nebuloſity. with 300 many vS. ſt. intermixed with the former, ſo as to make a Cl.
51	Oct. 19	71 (g) ——	p	5	49	f	0	9	1	A p. com. Cl. of pS. ſt. c. rich iR. 5 or 6′ dia.
52	—	— — ——	p	0	42	n	0	34	1	An extenſive Cl. of Lſt. c. rich above 20′ dia.
53	—	73 (ρ) ——	f	30	41	n	0	48	2	A L. Cl. of p. com. cLſt. above 15′ dia. c. rich.
54	Nov. 1	36 Camelop	f	29	1	n	0	16	1	A vF. patch. or S. Cl. of eSſt.
55	23	32 (ι) Cephei	f	57	34	n	1	47	3	A Cl. of cS. ſt. iF. p. rich and com. contains a vacancy M.

Eighth claſs. Coarſely ſcattered cluſters of ſtars.

VIII.	1785	Stars.		M.	S.		D.	M.	Ob	Deſcription.
41	Dec. 7	98 (k) Tauri	f	12	11	f	0	54	1	A co. Cl. of ſt. or projecting point of the m. way.
42	—	125 ——	p	1	22	f	0	4	2	A Cl. of co. ſc. ſt. above 15′ dia. The ſt. nearly of a ſize and equally ſc.
43	26	109 (n) ——	p	15	30	n	1	29	1	A Cl. of v. co. ſc. Lſt. join. to VII. 21.
44	28	5 (η) Can. min	f	0	38	f	1	54	1	A Cl. of v. co. ſc. Lſt. form a croſs. not rich.
45	31	6 Navis	p	32	48	f	0	1	1	A co. ſc. Cl. of ſt. not rich.
46	—	— ——	p	10	18	n	0	49	1	A vL. but co. ſc. Cl. of ſt.
47	—	— ——	p	10	27	n	0	39	1	A Cl. of ſc. ſt. or the m. way crouded with ſt. of equal ſize and colour.
48	1786 Jan. 1	78 Orionis	f	10	59	f	1	9	1	A Cl. of v. ſc. ſt. of various ſizes. above ½ degree of extent.
49	3	*B Gemi. 6m	p	33	23	n	0	35	1	A Cl. of co. ſc. Lſt. not rich. *See note
50	27	8 Monocero	f	10	58	n	0	49	2	A Cl. of ſt. arranged in a broad row. 25′ l. 6 or 8′ b. not v. com. but p. rich.
51	Feb. 23	11 ——	f	25	25	f	0	1	1	A Cl. of v. ſc. ſt.
52	Mar. 19	2 Navis	p	12	16	n	1	32	1	A Cl. of vL. co. ſc. ſt. not rich.
53	June 27	46 (υ) Sagitta	p	82	10	f	1	4	1	A Cl. of ſc. Sſt. 8′ dia. not v. rich.

VIII.	1786	Stars.		M.	S.		D.M.		Ob	Deſcription.
54	June 27	46 (υ) Sagitta	p	71	19	ſ	0	25	1	A co. ſc. Cl. of cLſt. The place is that of a S. triangle.
55	—	— — ——	p	64	17	ſ	0	23	1	A co. ſc. Cl. of Lſt.
56	Oct. 17	37 (γ) Cygni	f	0	53	n	0	32	1	A S. Cl. of co. ſc. ſt. of various ſizes. E. like a forming one.
57	—	58 (ν) ——	f	8	47	n	0	20	1	A Cl. of co. ſc. pS. ſt. of ſeveral ſizes. not rich.
58	24	57 ——	f	3	19	n	0	16	2	A Cl. of pL. ſc. ſt. not v. rich.
59	—	59 Perſei	f	7	59	n	0	21	1	A Cl. of co. ſc. pL. ſt. not v. rich.
60	Nov. 26	19 Monocero	p	5	3	ſ	0	23	1	A Cl. of pL. ſc. ſt. not v. rich. may be a projecting point of the m. way.
	1787									
61	Jan. 17	21 (σ) Aurigæ	p	16	38	ſ	0	30	1	A Cl. of co. ſc. Lſt. iF. not rich. like a forming one.
62	Sept. 19	35 (γ) Cephei	p	4	43	ſ	4	50	2	A Cl. of co. ſc. Lſt. not rich. but the ſt. are brilliant. one 7 m.
63	Oct. 16	21 (ζ) ——	f	1	21	ſ	0	56	1	A S. Cl. of pL. ſt.
64	Nov. 3	27 (γ) Caſſiop	f	11	12	n	0	53	2	A forming cluſter of p. com. ſt. C. H. diſc. 1783.
65	—	37 (δ) ——	f	17	56	n	0	29	2	A S. Cl. of Sſt. not v. rich. C. H. 1783.
66	—	45 (ε) ——	f	47	9	ſ	1	58	2	A Cl. of co. ſc. cLſt. 8 or 10′ dia. one 7 m. near M.
67	9	17 (ξ) Cephei	p	10	0	ſ	2	0	1	A Cl. of co. ſc. L. and S. ſt. 7′ dia. like a forming one.
68	12	41 Aurigæ	p	8	57	n	1	9	1	A S. Cl. of ſc. ſt. not rich one. 7 m. towards the n. but this does not ſeem connected with the Cl.
69	Dec. 3	18 Androm	p	8	59	ſ	1	20	1	A Cl. of co. ſc. pL. ſt. one 8 m. in the ſf. part.
	1788									
70	Feb. 3	41 (υ) Perſei	f	46	17	n	1	28	1	A Cl. of co. ſc. Lſt. p. rich above 20′ dia.
71	March 4	58 Aurigæ	p	1	22	ſ	0	44	1	A Cl. of co. ſc. pL. ſt. p. rich the place is that of a double ſt. of the 3d claſs.
72	July 30	62 Serpentis	p	27	26	n	0	6	3	A Cl. of co. ſc. Lſt. C. H. 1783.
73	—	59 (ξ) Aquilæ	p	4	2	ſ	0	34	1	A Cl. of co. ſc. ſt. with one pBſt. M.
74	Sept. 21	80 (1ſt π) Cyg	p	34	12	ſ	0	12	1	A Cl. of co. ſc. Lſt. not rich 6′ dia.
75	26	3 Lacertæ	p	7	29	ſ	2	21	2	A Cl. of co. ſc. Lſt. lE. ſp nf. 16′ l.
76	27	59 (1ſt f) Cyg	p	4	1	ſ	0	7	1	A ſt. 6 m. ſurrounded by many cſt. forming a brilliant ſc. Cl. the Lſt. not M. but f.
77	Nov. 1	27 (δ) Cephei	f	17	23	ſ	0	22	2	A Cl. of co. ſc. ſt. 8′ dia. C. H. 1787.
78	26	15 (κ) Caſſio	f	10	56	ſ	1	8	2	A Cl. of v. co. ſc. Lſt. take up 15 or 20′. C. H. diſc. 1784.

Notes to ſome nebulæ and cluſters of ſtars.

I. 138. The number refers to De la Caille's ſouthern catalogue in the Cœlum Auſtrale Stelliferum.

I. 190. A ſtar of the ſixth magnitude, not contained in any catalogue. I have called it C Canum Venaticorum. It follows Fl. 17. Can. Ven. 37′ 34″ in time, and is 0° 2′ more ſouth than that ſtar.

II. 566. See the note to I. 138.

638. See the note to I. 138.

697. See the note to I. 190.

703. A ſtar of the 7th magnitude, not contained in any catalogue. I called it A Ceti. Not having ſettled its place, I can only give it in a coarſe way. RA. about 0 h. 31′ 37″, PD. about 94° 22′.

III. 678. A ſtar of the 7th magnitude, not containen in any catalogue. I have called it A Bootis. It follows Fl. 39 Bootis 6′ 56″ in time, and is 0° 55′ more north.

681. See the note to I. 190.

742. A ſtar of the 7th magnitude, not contained in any catalogue. I have called it B Draconis. Its place very coarſely is RA. 18 h. 47′. PD. 41°¾.

747. See Mr. Wollaston's general catalogue. Zone 20°.

VIII. 49. A ſtar of the 6th magnitude, not contained in any catalogue. I have called it B Geminorum. Not having ſettled its place, I can only give it in a coarſe way, RA. about 6 h. 52′ 4″. PD. about 55° 17′.

P. S. The planet Saturn has a *ſixth ſatellite* revolving round it in about 32 hours, 48 minutes. Its orbit lies exactly in the plane of the Ring, and within that of the firſt ſatellite. An account of its diſcovery with the forty-feet reflector, and a more accurate determination of its revolution and diſtance from the planet will be preſented to the Royal Society at their next Meetings.

WILLIAM HERSCHEL.